

Table: Combat Service Support overview on 31 January 1991

Location	Logistic Unit (s)	Supported Unit (s)	Distance From Border (Kilometers)
RPP Brown	MCSSD-26	6th Marines	20
Qaraah	CSSDs-10/13	1st MarDiv	30
Kibrit	-DSC -CSSD-91 -NMCB-5 NMCB-40	-Forward Battle Area -I MEF EPW -I MEF	50
Mishab	-GSG-2 -MWSS-273 NMCB-74 NMCB-24	-I MEF -MAG-26	50
Hobo Alley	DSG-2	2d MarDIV	70
Safariya	3d NCR	I MEF HQ	70
South of Kibrit	MCSSD-28	8th Marines	80
Tanajib	MWSS-271 CSSD-132	MAG-16	90
Jubayl Naval Air Facility	MWSS-374 CSSD-132	3d MAW HQ MAGs 16&26	195
Port of Jubayl	1st FSSG -GSG-1	I MEF	210
King Abdul Aziz Naval Air Station	MWSS-37 MWSS-174	MAG-13 (Fwd)	220
Shaikh Isa	MWSS-373 CSSD-131	MAG-11	360

transported supplies to the DSGs which in turn distributed supplies to the MCSSDs which directly supported the assault forces.

During the first two days of February, Task Force Papa Bear tactically moved 100 kilometers northwest from its positions at the Triangle to an assembly area near qaraah.<sup>399</sup> Captain Burke, the commander of MCSSD-11 in support of Papa Bear, used the road march to train with the 1st Division task force and to validate its daily fuel consumption. On the night before the move, Burke sent his refuellers to top off fuel tanks and then dispatched his eight-point rapid refueling systems to establish a forward refueling point. On the 1st, Papa Bear quickly and smoothly filled up at the enroute refueling point and continued its road march. That evening, while the mechanized force halted, MCSSD-11's refuelers again topped it off. The next morning, the MCSSD sprinted for qaraah along the road while the Task Force maneuvered cross country to its new location. After Papa Bear reached qaraah and established defensive positions, Captain Burke distributed food, water, and fuel to its battalions. Burke not only wanted to ensure that the task force was logistically ready to fight now that they were close to the border, but, also, to record the fuel data from the last leg of the journey. With the fuel figures from the road march, Captain Burke calculated Papa Bear's daily consumption rates which he used to plan for the attack.<sup>400</sup>

During the early morning hours of 2 February, U.S. Navy aircraft mistakenly bombed Battery S, 5th Battalion, 11th Marines, 30 kilometers north of qaraah, killing one Marine and wounding two others. Since helicopter medevac was not available, the wounded Marines were evacuated through qaraah to the DSC at Kibrit. CSSD-10's Graves Registrations Platoon processed the dead Marine.<sup>401</sup>

The artillery battery was on its way back from one of the combined arms raids that both divisions had conducted along the Kuwaiti border. Following this incident, the 1st Marine Division conducted a number of these raids in which CSSD-10 provided supply support and DSG-1 arranged heavy equipment transportation with the DSC. Colonel Powell, the DSG-1 commander, believed the raids gave his Marines experience in rapidly supporting combat operations and working closely with the division.<sup>402</sup>

On 3 February, Task Force Ripper and MCSSD-17 moved 110 kilometers to positions south of Papa Bear near the intersection of the Kibrit and qaraah roads. The new location was 60 kilometers south of the border and 50 kilometers west of Kibrit. Upon arrival, Ripper sharpened its breaching skills, rehearsed its planned attack on the Al Jaber Air Base, and launched a small operation against the Iraqis. Captain Winter, the MCSSD-17 commander, took advantage of Ripper's simulated breach lanes by evaluating the trafficability through them and adjusting accordingly his truck loads and equipment.

At the new location, Reservists from Company C, 1st Battalion, 25th Marines, commanded by Major Joseph W. Lydon, joined Ripper to manage prisoners of war who might be captured during the assault. Lydon lacked transportation for his Marines and appealed to MCSSD-17 for assistance. Prior to the war, Captain Winter had been the Inspector-Instructor of the Reserve unit in New

Haven, Connecticut, and had trained with Lydon's company which was from nearby Plainville, Connecticut. Winter agreed to haul some of the Reserve infantry which would give the mobile additional protection against pockets of any hostile Iraqis bypassed by the Task Force during the attack.

In another action following the northward deployment and illustrating the mobile's close working relationship with the task force, Ripper's Tactical Air Control Party and the 3d Tank Battalion had moved another 100 kilometers north to Observation Post 6, where they controlled an air strike against Iraqi positions in Kuwait. MCSSD-17 provided a small convoy carrying fuel, water, MREs, and tank ammunition to support the operation.<sup>403</sup>

Also moving north with the MEF, the 3d MAW deployed units closer to the border to support the coming ground attack. MWSG-37 continued to prepare Mishab and Tanajib for MAGs-16 and -26 and to help relocate both helicopter groups in their new locations. Colonel Coop, the MWSG-37 commander, formed a provisional truck company with assets gleaned from within the support group. First Lieutenant Thomas L. Hankinson led the MWSG truck company which eventually grew to 30 vehicles.<sup>404</sup> On 3 February, the MV *Ciudad De Manta* docked at Mishab with a load of AM2 matting that MWSS-273 began laying at the port and MWSS-271 started placing at Tanajib. The following day, MAG-26 began arriving at Mishab, while at Qaraah, MWSS-273 established a FARP to support helicopter operations during the ground assault. To assist General Myatt, the 1st Division commander, Colonel Coop collected D-7 bulldozers from his squadrons and transferred them to the division. At Tanajib, General Brabham activated CSSD-133, commanded by Captain Eric R. Junger, to support MWSS-271 and MAG-16. On the 9th, elements of MWSS-174 from King Abdul Aziz Naval Air Station joined MWSS-271 at Tanajib and set up a support area for AV-8 Harrier Jump Jets. Operating Harriers from Tanajib reduced the distance to the border and allowed the attack jets to rearm, refuel, and return quickly to the battle.<sup>405</sup> At the Jubayl Naval Air Facility, the wing headquarters, MWSS-374, continued its support of operations there under the command of Lieutenant Colonel Brian E. Dyck, who at the beginning of the month replaced Lieutenant Colonel Stephen G. Hornberger.<sup>406</sup>

### *I MEF Changes Its Plan*

*For the logisticians, the war didn't begin on G-day-24 Feb-with the start of the ground assault; it really began about three weeks earlier, when General Boomer decided to breach the Iraqi defenses in two places with two Marine divisions, instead of a single breach with one division. —BGen Charles C. Krulak*

### *The Decision*

On 4 February, General Krulak visited MCSSD-26 near the border and decided to stop by the 2d Marine Division command post on his way back to

Kibrit. Krulak found General Keys, the division commander, in a meeting with General Boomer; Colonel Ronald G. Richard, the division operations officer; and Colonel Donnelly, the DSG-2 commander. Boomer greeted Krulak and immediately asked him his opinion about a proposal that General Keys had made to conduct a two-division breach of the Iraqi defenses as opposed to a single penetration. Krulak replied that he favored the recommendation for a number of tactical reasons and believed there was enough mine-clearing equipment to support the concept. On the map, General Boomer showed the DSC commander a spot west of Kuwait, located about 150 kilometers from Kibrit and asked him, "the \$64,000 question—Can you support a two-division breach on the western flank of Kuwait?" While having some internal doubts, Krulak swallowed hard and answered the MEF commander, "I know I can't support that from Kibrit. I need to find another location for the combat service support area."<sup>407</sup> Boomer replied that he was still undecided, but ordered the DSC commander to find a location and to prepare an estimate of supportability for Keys' plan.

Immediately upon his return to Kibrit, General Krulak gathered his key personnel and planned to find a new location to support a two-division attack. After briefing the group on the situation, Krulak ordered Colonel Gary S. McKissock, who was on loan to the DSC from II MEF where he served as the logistics officer, to scout an area called the gravel plains located 30 kilometers northwest of qaraah. Krulak then directed Colonel Tace, his operations officer, to call Colonel Billy C. Steed, I MEF's operations officer, to find out when General Boomer would make his decision. Steed replied that Boomer would decide at the next commanders' meeting scheduled in less than 36 hours for 0830, 6 February.<sup>408</sup> Early the next morning, McKissock led a small party to the gravel plains where they surveyed three locations. At each site, members of the team, which consisted of the DSC staff and a few battalion commanders, spent 30 minutes assessing the suitability of each location from their functional perspective. After returning to Kibrit, the team briefed General Krulak on the strengths and weaknesses of each site.<sup>409</sup> The DSC commander selected a location to the east of the gravel plains, designated it as Combat Service Support Area 2 (CSSA-2), and after holding a quick "contest" among his staff to determine a suitable name, called it Khanjar after the dagger worn by Saudi males.<sup>410</sup>

Of the three sites scouted by Colonel McKissock, Khanjar was the closest to the border, out of Iraqi artillery range, well positioned to support units attacking east into Kuwait, and flat and spacious enough to stage the huge amount of supplies needed to sustain the assault. Unlike Kibrit, the new location could not easily be supported from nearby Mishab, which required that the amount of supplies stored at Khanjar be doubled to 15 days. To make the rapid relocation, General Krulak needed Saudi Motors and all of his own transportation to stock Khanjar and to suspend unit distribution to DSG-1 and -2. In the event Boomer decided upon a two-division attack, Krulak ordered the DSC's earth-moving equipment loaded on trucks for rapid displacement to Khanjar.

Early the next morning, General Krulak drove 80 kilometers from Kibrit to I MEF's forward headquarters at Ras Al Safaniyah on the Persian Gulf. The



*Photo courtesy of Col Alexander W. Powell*

*BGen Krulak briefs the DSC staff and commanders on 7 February 1991 at Kibrit. In the next two weeks, the DSC would relocate to a point three times the distance from the Port of Mishab and move more than twice the amount of supplies stocked at Kibrit. The relocation permitted I MEF to launch its attack into Kuwait on a two-division front.*

commanders' conference started on time and addressed many subjects, some of which skirted the issue of the two-division breach. General Boomer encouraged maximum participation at his meeting and many commanders spoke about their portion of the upcoming battle. After three hours of discussion and no decision, General Krulak was concerned that time was wasting and that he needed to get his trucks on the road. Lieutenant General Boomer stopped the conference at 1130 for lunch and Krulak requested a few moments with the commanding general. He then briefed General Boomer that his trucks were ready to move to Khanjar, advised him that "every second counted," and asked the MEF commander whether a decision had been made. Boomer looked Krulak in the eye and said, "We will make a two-division breach of the Iraqi defenses..."<sup>411\*</sup> General Krulak's aide, First Lieutenant Joseph W. Collins, Jr., called Colonel McKissock at Kibrit who started the DSC trucks moving towards Khanjar and began I MEF's massive push to the west, less than 48 hours after General Krulak paid his courtesy call on General Keys.<sup>412</sup>

### *Khanjar*

At Khanjar, Lieutenant Colonel John's 7th Engineer Support Battalion took the lead in planning construction and worked as a team with Lieutenant Colonel Skipper's 8th Engineer Support Battalion. The two organizations raced to

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\*Gen Krulak commented that Gen Boomer's decision was very brave, since it would move I MEF's logistics another 100 kilometers in from the sea. Additionally, Gen Boomer made his decision to move to Khanjar over the objections of Col Raymond A. List, I MEF's logistics officer. (Krulak comments)

meet General Krulak's deadline of 20 February for establishing CSSA-2. While the two battalions swapped equipment as required, each worked on its own sets of projects which included building ammunition cells, berms, roads, working spaces, billeting areas, and setting up water and bulk fuel storage areas. Manning 12-hour shifts, the engineers operated the equipment 24 hours a day, except for that small amount requiring maintenance.\* The Marines dug in a field hospital with 14 operating rooms and started a C-130 air strip, which became operational on the 10th. By the next week, the engineers had completed 24 miles of blastwall, 151 ammunition cells, 800 survivability positions, and huge water and fuel storage areas. The fuel farm dispensed fuel to ground vehicles and to MAG-26's new air facility at neighboring Lonesome Dove by pipeline.<sup>413</sup> The ammunition storage area, called Forward Ammunition Supply Point (FASP) 5, covered 770 acres while the entire Khanjar complex extended over 11,280 acres.<sup>414\*\*</sup>

The Seabees of NMCB-40 arrived at Khanjar on the 10th to drill for water. Unfortunately, after working around the clock and after reaching a depth of 1,050 feet, they still had discovered no water.<sup>415</sup> Four days after the Naval engineers started their drilling, Captain Peter M. Ramey, DSG-2's engineer detachment commander, noticed a metal pipe and a valve sticking out of the ground four kilometers northeast of Khanjar. When the Marines turned on the valve, water gushed out. General Krulak dubbed the discovery the "miracle well." The 8th Engineer Support Battalion sent a purification team which found that the water was of a terrible quality and dissolved the filters of their ROWPUs. Despite that problem, the engineers purified 100,000 gallons per day from the "miracle well," easing the burden for Marine motor transport units which had been hauling fresh water all the way from Mishab. By 19 February, the DSC had pooled a 796,000 gallon water reserve at Khanjar.<sup>416</sup>

### *Lonesome Dove*

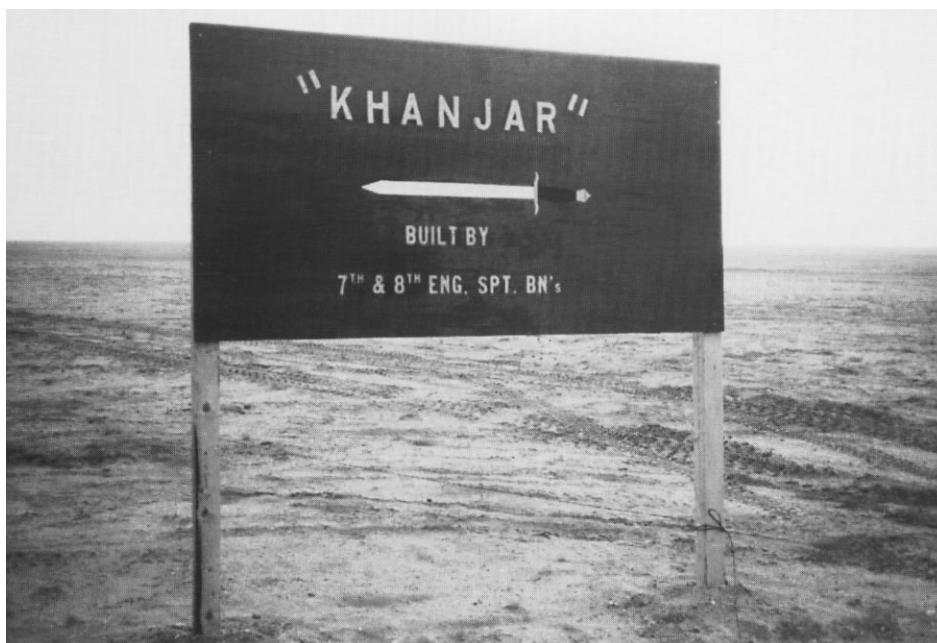
At the same time as the DSC deployed to its forward base at Khanjar, the 3d MAW also established its supporting Lonesome Dove helicopter facility. Since 8 February, MAG-26 had stopped its move to Mishab and began its relocation to the new base next to Khanjar.<sup>\*\*\*</sup> Colonel Coop, the MWSG commander, ordered Lieutenant Colonel Riznychok's MWSS-273 to deploy with the MAG. The MWSS immediately started shuttling engineer equipment from Mishab to Lonesome Dove on its three 870 trailers. To help with the relocation, Lieutenant

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\*After the battles of Khafji and OP-4, I MEF believed the Iraqis could not observe I MEF's movements and locations in Saudi Arabia. As a result, trucks drove along the Kibrit road using their headlights and engineer equipment operated at Khanjar with lights on. (Woodson and Songer intvw, 19Mar96)

\*\*In March 1997, Gen Krulak remarked that Khanjar was so big that even six years after the war, you can still see its imprint on satellite pictures. (Krulak comments)

\*\*\*Lonesome Dove was the name most commonly associated with the MAG-26 base. It was also called Khanjar and the Gravel Plains. Likewise, CSSA-2 at Khanjar was sometimes, if rarely, referred to as Lonesome Dove.



*Photo courtesy of CW05 Thomas M. Sturtevant*

*The Marines named the new DSC support area "Khanjar," meaning "dagger" in Arabic. The 7th and 8th Engineer Support Battalions built this huge support base, whose outlines still can be seen clearly in satellite photographs six years after the war.*

Hankinson's MWSSG-37 provisional truck company began moving AM2 matting, reinforcing 50 5-ton trucks already leant to the wing by the 1st Marine Division for the task.<sup>417</sup> Riznychok split his material handling equipment by assigning six forklifts to lay AM2 matting at the new location and kept the remainder of his equipment deployed between Mishab and Lonesome Dove. Having no trucks large enough to transport its giant rough-terrain container hauler (RTCH), MWSS-273 deployed to Lonesome Dove a 30-ton crane, which, while slow and somewhat inefficient, unloaded 140 ISO containers for MAG-26. Seabees from NMCB-24 joined MWSS-273's engineers and laid 900,000 feet of AM2 matting to park helicopters and surrounded the air field with a four-kilometer berm. DSC engineers set up an assault amphibious fuel system and connected it to MWSS-273's tactical fuel dispensing system. On the 19th, Colonel Coop sent MWSSG-37's nuclear, biological, and chemical team to MWSS-273 to establish a chemical casualty decontamination site. Three days later, with the help of commercial trucks, MAG-26 completed its move to Lonesome Dove.<sup>418</sup>

### *The Seabees*

To support the buildup and to conduct deception operations, Captain Johnson, the Seabee commander, sent additional elements of the 3d NCR to the border area. At Khanjar, NMCB-24, with the help of personnel from NMCB-5, erected I MEF's command post and, with the DSC engineers, built two airstrips,

one of which measured 6,600-feet by 150-feet and was completed in 48 hours. After about 20 landings, the Seabees graded and rolled each runway to keep them operational. To the southeast at Qaraah, NMCB-5 constructed a 1,500-foot runway with AM2 matting for remotely piloted vehicles, and maintained the airstrip for C-130 Hercules operations. From Kibrit, NMCB-74 participated in I MEF's deception effort. The Seabees built prefabricated tank turrets and artillery pieces from wood and moved them to an area along the Saudi-Kuwaiti border. The purpose of this operation, called Flail, was to trick the enemy into believing that I MEF's attack would be at a different time and location than planned. The Iraqis rewarded the Seabees' good work by shooting artillery and mortars at the decoys and maneuvering two brigades into the area.<sup>419</sup>

### *The Buildup*

The Marine motor transport units also had played an important role in the buildup of the new base areas. Since 9 February, the 8th Motor Transport Battalion, reinforced with trucks and drivers from the 6th and 7th Motor Transport

*Diagram of CSSA-2 at Al Khanjar.*

Diagram from DSC ComdC 22Dec90-15Feb91

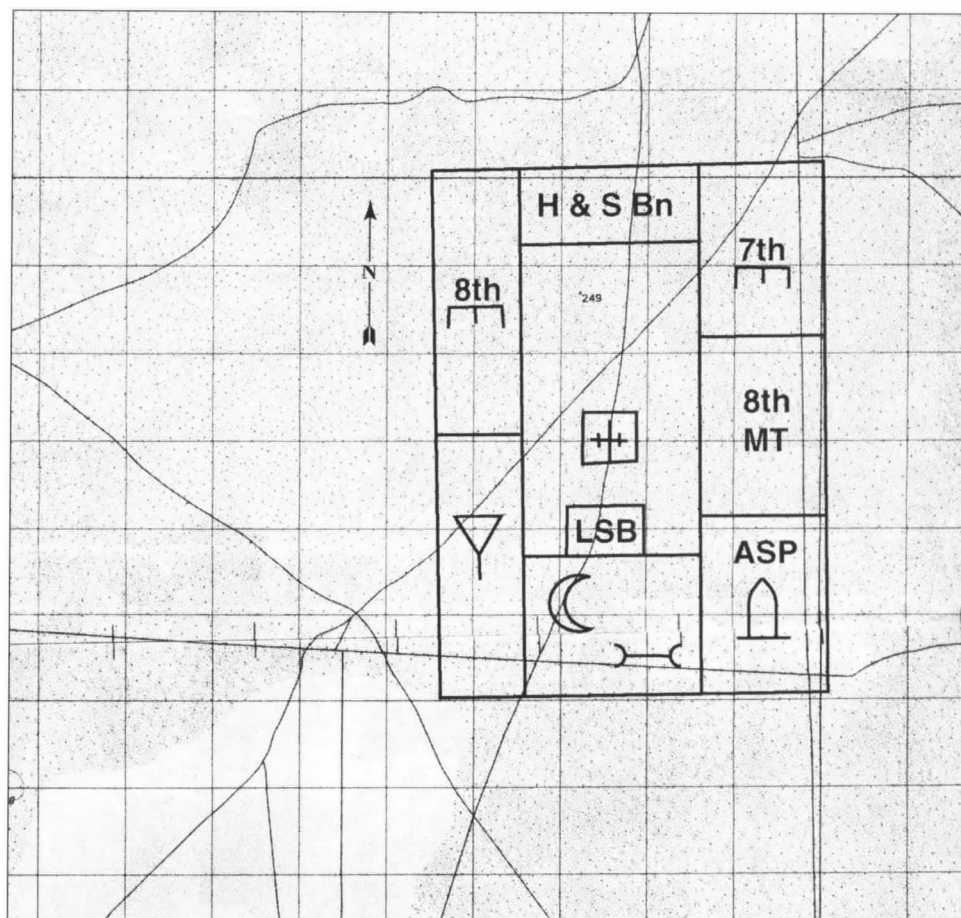






Photo courtesy of CWO5 Thomas M. Sturtevant

*A DSC crane unloads an LVS with tandem trailers. The 8th Motor Transport Battalion, reinforced with elements of the 6th and 7th Motor Transport Battalions, drove 1.2 million miles in 14 days to stock Khanjar.*

Battalions, suspended unit distribution to the DSGs and began moving supplies and equipment to Khanjar. Working around the clock and driving nights with lights on, the battalion moved containers, engineer equipment, repair parts, MREs, and medical supplies. Also working around the clock were the DSC's mechanics who kept 98 percent of the 8th Motor Transport Battalion's trucks on the road.<sup>420</sup> Lieutenant Colonel Woodson, the battalion commander, concentrated the unit's efforts on emptying Kibrit and, after the 13th, redirected part of the battalion's assets to relocating the MEF headquarters to Khanjar, moving ammunition from Mishab, and picking up supplies from as far south as Jubayl.<sup>421</sup> During the 14-day push to stock CSSA-2, the 8th Motor Transport Battalion drove more than a million miles.<sup>422\*</sup>

While the DSC focused on moving from Kibrit to Khanjar, General Brabham relied on the 6th Motor Transport Battalion to push the additional eight days of supplies to CSSA-2. Lieutenant Colonel Walters used his Reserve drivers, the remaining foreign operators, and about 100 volunteers to establish a circuit course between Jubayl and FASP-5 near Khanjar. Walters called the FASP-5-Jubayl loop the Baghdad Express. Brabham contributed his personal driver, who along with the other volunteers, received a four-hour training package prior to making runs. Walter's plan called for establishing transfer points at Mishab and

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\*Six years after the war, Gen Krulak still stressed the accomplishments of the drivers from the 8th Motor Transport Battalion and their reinforcements from the 6th and 7th Motor Transport Battalions who drove the 1.2 million miles in 14 days. Additionally, he complimented the DSC's maintenance Marines who kept 98 percent of the trucks operational during the push to Khanjar. (Krulak comments)



Photo courtesy of CWO5 Thomas M. Sturtevant

*The "Baghdad Express" delivers a 40-foot container to the supply point at Khanjar. BGen Brabham sent I MEF its supplies on an assortment of civilian vehicles driven by Marine Reservists and third world nationals.*

Khanjar where full trailers were exchanged for empty ones. Because of the incompatibility between the myriad types of civilian trucks and trailers and because many trailers were welded to their cabs, Walters ordered that rigs remain together for the entire trip. The 6th Motor Transport Battalion deployed three teams of drivers to work the Jubayl to Mishab, the Mishab to Khanjar, and the Khanjar to FASP-5 loops. At each location, the driver dropped off a full truck, picked up an empty rig, and returned to his point of origin to complete the loop and to start another.<sup>423</sup>

Almost immediately after the inauguration of the Baghdad Express, it ran into trouble with more than half of its 600 trucks breaking down on the road. General Brabham first concentrated his efforts on trying to fix the vehicles and ordered GSG-1 to repair as many trucks as possible. Major Felix M. Bush, the 2d Maintenance Battalion executive officer, lacked the mechanics, tools, and test equipment to repair major problems, but focused the efforts on ensuring that the hodgepodge of civilian trucks ran safely. Bush set up an assembly line in a warehouse at Jubayl to check, repair, and replace tires, brakes, brake lines, fuel lines, horns, and lights. The maintenance battalion requested bulk orders of parts through the GSG-1 staff, who coordinated purchases from the Saudi economy.\*

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\*In addition to maintaining equipment, Col Marlin D. Hilton's 2d Maintenance Battalion conducted deception operations by intermittently moving and manning ORF tanks around the Port of Jubayl. On 16 February, a SCUD missile landed in the water 150 meters from Berth 6, which was packed with ammunition, and 300 meters from the USS *Tarawa*, which was carrying the 5th MEB. (Pankey comments; 1st FSSG ComdC Dec90-Feb91, Sec 3; GSG-1 ComdC Feb 91, Sec. 3)



Photo courtesy of LtGen James A. Brabham, Jr.

*Marine mechanics from the 2d Maintenance Battalion at the Port of Jubayl repair one of the rickety commercial vehicles that made up the "Baghdad Express."*

Farther north, GSG-2's maintenance detachment recovered and patched up some of the vehicles that broke down between Mishab and Kibrit, while the DSC's maintenance detachment recovered 283 vehicles between Kibrit and Khanjar.<sup>424</sup>

As the 2d Maintenance Battalion struggled to keep vehicles safely on the road, General Brabham threw more trucks at the problem. Brabham ordered his supply support officer, Major Philip N. Yff (pronounced eyeff), who spoke Arabic and knew the region's customs, to concentrate his efforts on obtaining more trucks from the Saudi economy.\* This was not an easy task since competition was fierce among the Marine Corps, the U.S. Army, the British, and the Saudi military

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\*Maj Yff accompanied Gen Brabham to Saudi Arabia in August 1990. (Kelly comments)



Photo courtesy of LtGen James A. Brabham, Jr.

*The DSC engineers built 151 ammunition cells at Khanjar FASP-5. These cells held more than 40,000 tons of munitions, enough for 15 days of combat for the 1st and 2d Marine Divisions.*

to obtain local transportation. Yff travelled throughout Saudi Arabia and the neighboring country of Qatar hunting for vehicles. Choking down large quantities of tea and coffee, both of which he disliked, and sitting patiently through long meetings with Arab vendors, Yff successfully bargained with local businessmen and procured 500 vehicles to support the buildup.<sup>425</sup>

At Mishab, GSG-2's 7th Motor Transport Battalion pressed into service a rickety collection of contracted trucks to push water to Khanjar. Major Yff sent Lieutenant Colonel Smith, the battalion commander, 46 commercial tractors and 40-foot trailers fitted with sixcon water pods. Reserve Marines from the 4th Landing Support Battalion received only one hour of instruction at Jubayl prior to operating the 16-speed, split-shift manual transmissions of the water trucks. Almost immediately, broken-down water trucks littered the road as a result of burned-out clutches, bad road conditions, and the overall poor condition of the vehicles. To compensate, Major Yff scrapped the bottom of the barrel and sent 65 more commercial water trucks. Of the vehicles that limped into Mishab on bald tires and wheezing engines, only 40 percent were sanitary enough to transport potable water. Major Robert W. Ferguson, Jr., the 7th Motor Transport Battalion's operations officer, was certain that the Saudis had robbed every junk yard in the Persian Gulf, and the battalion's maintenance detachment succeeded in keeping only a discouraging number of the derelict fleet on the road with spare parts purchased from the local economy.<sup>426</sup>

To stock Khanjar with 15 days of fuel, GSG-2's 7th Motor Transport Battalion put its 25 refueling vehicles, which were mostly M970 5,000-gallon



Photo courtesy of LtGen James A. Brabham, Jr.

*A C-130 Hercules cargo aircraft lands on the dirt strip at Khanjar. Both USMC and USAF aircraft flew cargo an average of 25 missions each day to Khanjar, Qaraah, and Kibrit.*

refuellers, on the road. Lieutenant Colonel Smith, however, did not have enough trucks to haul the required amount of fuel. To help, I MEF acquired the services of 60 M967 5,000-gallon bulk hull refuellers from the U.S. Army, which were operated by the Army's 10th Transportation Battalion, and the 475th Quartermasters Group (240th and 370th Quartermaster Battalions).<sup>427</sup> The Army trucks moved fuel in large convoys that stretched over the horizon. The DSC's bulk fuel Marines, knowing that they were in for a work surge when the Army rolled into Khanjar, called the convoys the "trucks from hell."<sup>428\*</sup> Between the Army and GSG-2, Khanjar's stocks reached 4,800,000 gallons of fuel by 19 February.<sup>429</sup>

General Brabham also pressed into service 3d MAW helicopters, Army coastal craft, and U.S. Air Force C-130 aircraft to push supplies north. Working from the concept that every little bit helps, the 3d MAW flew an average of 25 missions a day moving cargo to Khanjar, Kibrit, and Qaraah. Responding to a request from I MEF's Military Airlift Command's liaison officer, the Air Force flew an average 50 C-130 sorties a day to I MEF's expeditionary airfields at Mishab, Kibrit, Qaraah, and Khanjar. General Brabham obtained the use of logistics support vessels and landing craft from the U.S. Army which made the run from Jubayl to Mishab. At Mishab, GSG-2 unloaded two more ships during the month and sent the contents to Khanjar and Lonesome Dove.<sup>430</sup> On the 17th, Colonel Hampton, the GSG-2 commander, ordered the 2d Landing Support Battalion, under Lieutenant Colonel David B. Kirkwood, to redesignate as CSSD-82 and to operate Kibrit after the DSC moved to Khanjar. The same day, General Brabham transferred CSSD-133 at Tanajib to GSG-2.<sup>431</sup>

The roads between Mishab and Khanjar at some points exceeded fourteen

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\*On one day during the buildup, the 240th Quartermaster Battalion hauled 495,000 gallons of fuel to Khanjar. (Skipper comments)



rutted lanes in width and required extensive maintenance. Captain Johnson, the Seabee commander, ordered NMCB-74 at Kibrit to maintain the 100 kilometers of road between Mishab and the intersection of the Qaraah road. NMCB-5 and elements of NMCB-40 at Qaraah were responsible for the road from Qaraah to the intersection of the Kibrit highway and from there west to the Khanjar road. Johnson gave NMCB-24 the responsibility for the last leg of the main supply route from Khanjar to the intersection with the Kibrit road. He pulled people and equipment from Bahrain and sent them north to augment the road maintenance effort.<sup>432</sup>

### *The 2d Marine Division and DSG-2 Move West*

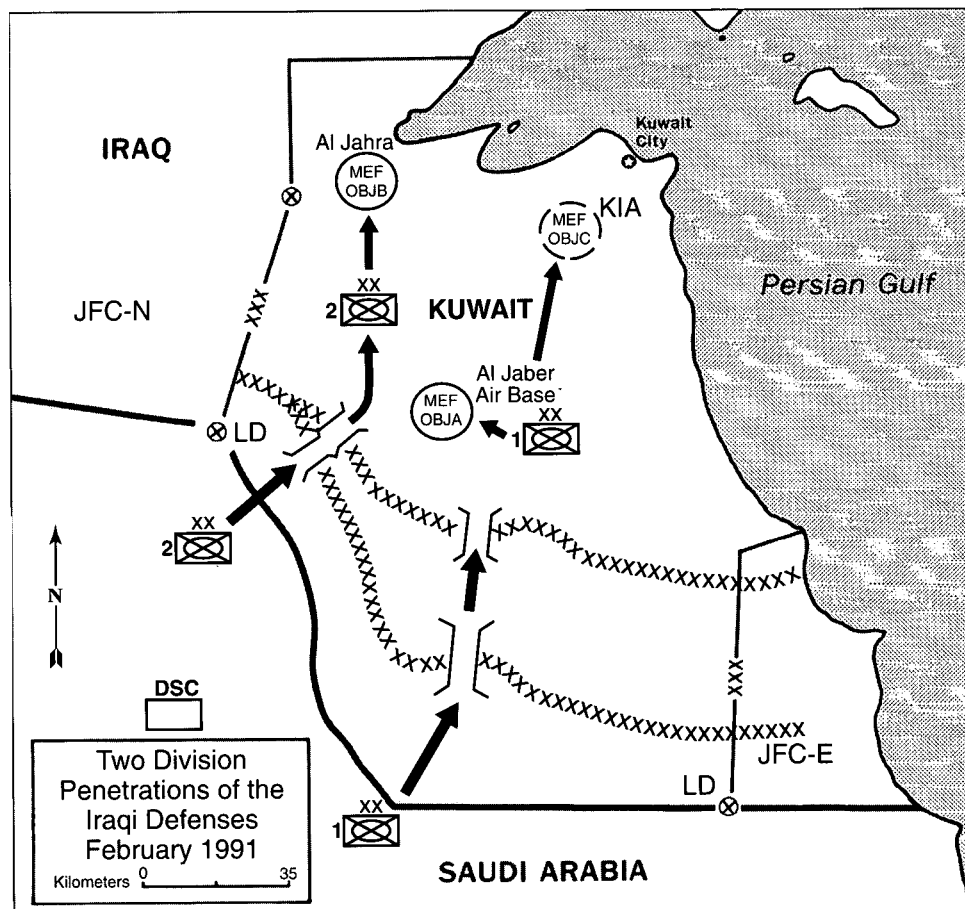
DSC's move to Khanjar allowed the 2d Marine Division to plan a separate breach of the Iraqi defenses northwest of the 1st Marine Division. I MEF's new scheme of maneuver shortened and modified the direction of the 2d Marine Division's attack route without changing either division's objectives. To execute the new plan, the 2d Marine Division would attack from positions between Khanjar and the border with the 6th Marines given the mission to lead the way into Kuwait through the Iraqi minefield, followed by the Tiger Brigade and 8th Marines.<sup>433</sup> After crossing both obstacle belts, the Tiger Brigade would swing to the left of the 6th Marines and the 8th Marines would maneuver to the east. The 2d Tank Battalion would remain in reserve.

In preparation for its new mission, the 6th Marines had deployed, on 6 and 7 February, to a breach-training area located 30 kilometers west of Kibrit to practice piercing the Iraqi minefields. Colonel Livingston, the regimental commander, planned to cut six lanes through the two Iraqi obstacle belts with Task Force Breach A and Company C, 2d Combat Engineers.\* On the 11th, the DSC sent Captain Brian J. Hearnberger's Company B, 8th Engineer Support Battalion, to the 2d Marine Division to reinforce the 6th Marines breaching effort.<sup>434</sup> Following the engineers, the 1st Battalion, 6th Marines; the 2d Battalion, 2d Marines; and the 1st Battalion, 8th Marines, all mechanized, would cross the obstacle belts on two lanes each and establish a breachhead on the far side of the minefields. The 8th Tank Battalion; the 3d Battalion, 6th Marines (motorized); the 2d Battalion, 10th Marines, and MCSSD-26 would move behind the mechanized battalions. After the 2d Battalion, 10th Marines, established firing positions on the far side of the minefields, the 2d Battalion, 12th Marines would move through the breach and join the regiment.<sup>435</sup>

Since 8 February when it had arrived at the breach training area and established RRP Moats there, MCSSD-26 supported the 6th Marines, pulled supplies from Kibrit, expanded its medical capability, and rehearsed its role in the

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\*Company C, 2d CEB, was a remnant of Task Force Breach B which was formed to support the 8th Marines in January 1991. After 5 February, Task Force Breach B ceased to exist and Company C, reinforced with tanks and AAVs, was placed in direct support of the 1st Battalion 8th Marines. (2d CEB ComdC 16Jan-28Feb91, Sec II)



assault. The breach training area was laid out with six lanes on the same azimuth and scale that the 6th Marines would face in Kuwait.\* For several days, the mobile, under Lieutenant Colonel Wittle, practiced and simulated different problems that could arise in the minefields, such as blocked lanes and radio jamming. Wittle would move MCSSD-26 in two serials as a component of the 6th Marines team, which reached a size of 7,800 Marines and sailors and 1,098 pieces of rolling stock.<sup>436</sup> The large force drilled moving rapidly through the simulated obstacle belts to avoid bunching up and becoming lucrative artillery targets.<sup>437\*\*</sup> After training during the day, each night MCSSD-26 distributed to the regiment an average 15,000 gallons of water, 36 pallets of MREs, and 16,000 gallons of fuel. Adding to the exhaustive schedule, Lieutenant Colonel Wittle sent convoys to Kibrit to pull supplies for the regiment. Also at RRP Moats, a 20-man collection and clearing team, led by Navy Lieutenant Kenneth P. Collington, joined the

\*In accordance with doctrine, the engineers marked the lanes with trash cans painted red for lanes 1 and 2, blue for lanes 3 and 4, and green for lanes 5 and 6. (Skipper comments)

\*\*During this period, Hearnberger's Company B, 8th Engineer Support Battalion, worked closely with the 6th Marines to identify and practice command and control procedures similar to those used in an amphibious landing. (Skipper comments)

MCSSD, giving it the ability to stabilize, resuscitate, and evacuate casualties.<sup>438</sup> The 6th Marines called the arrival of the collection and clearing team a “major milestone” and “the final facet of the regimental ground evacuation plan . . . .”<sup>439</sup>

In the meantime, Colonel Schmidt had moved his 8th Marines into the 6th Marines’ old defensive positions south of Al-Wafra, transferred the 1st Battalion, 8th Marines, to the latter regiment, and added the 2d Light Armored Infantry Battalion and the 2d Reconnaissance Battalion to his operational control.\* Moving in two echelons, MCSSD-28, under Lieutenant Colonel James W. Head, joined the 8th Marines and established a position 25 kilometers south of the border and 40 kilometers northwest of Kibrit. At this location, the mobile again pushed support to the regiment’s battalions while Captain Drew B. Miller, the assistant operations officer, refined the mobile’s extensive biological and chemical defensive capabilities and procedures.<sup>440</sup> Five days after arriving, a fire broke out on 13 February, destroying a MCSSD-28 refueler during a resupply mission with Company F, 2d Light Armored Infantry Battalion. While northwest of Kibrit, MCSSD-28 added a collecting and clearing and graves registration team to its roster bringing the personnel strength of the mobile to 241.<sup>441</sup>

Until the 16th, DSG-2 remained at Hobo Alley where it prepared to move to the northwest in accordance with the DSC’s deployment plan. A week earlier, after reviewing stockage levels and lift requirements, the DSC had suspended unit distribution to permit DSG-2 and its mobiles to relocate to the northwest using their own transportation. Upon completion of the relocation, the DSC would reinstate unit distribution and replenish DSG-2’s stocks.<sup>442</sup> Accordingly, DSG-2 remained south of the Kibrit road, topped off passing 2d Marine Division units who then drew their supplies from the DSC as they moved farther west.<sup>443\*\*</sup> For example, MCSSD-26, which pulled supplies from Kibrit, supported the two artillery battalions in direct support of the 6th Marines.<sup>444</sup> Additionally, the 502d Support Battalion, which supported the Tiger Brigade, pulled supplies from the Marines with 80 fuel and cargo trucks and some commercial water tankers that it had received from ArCent.<sup>445</sup> To supply the Tigers with rocket pods for their Multiple Launch Rocket Systems (MLRS), Captain Tobin, DSG-2’s liaison officer to the 502d Support Battalion, coordinated delivery of 60 MLRS pods with the 8th Motor Transport Battalion.<sup>446\*\*\*</sup>

Finally, on the 14th, MCSSD-26 led the way west for DSG-2 by establishing RRP Stewart, 20 kilometers northeast of Khanjar and 22 kilometers from

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\*The lack of trucks caused the 8th Marines to take four days to deploy its two remaining battalions to the Kuwaiti border. MCSSD-28 provided truck support to the regiment. (Head comments)

\*\*The units that topped off at Hobo Alley drew down DSG-2’s stock of supplies and reduced the burden of its pending move west. (Donnelly comments)

\*\*\*Because of the size of the MLRS pods, the 8th Motor Transport Battalion dedicated 15 LVSs with tandem trailer to make two round trips from the FASP-4 at Kibrit to the Tigers’ location. Col Woodson considered the large but light MLRS pods, which required one LVS bed to haul each pod, inefficient but necessary loads. (Woodson and Songer intvw, 19Mar96)



the border. Two days later, the 6th Marines moved to its final assembly areas northeast of Khanjar and within 10 kilometers of the Kuwaiti border.<sup>447</sup> Colonel Livingston deployed his assault battalions on a 20-kilometer north-south line which protected his reserve battalions, the artillery, Task Force Breach A, and MCSSD-26. The mobile was located 13 kilometers from the most distant element of the regiment.<sup>448</sup> At that time, Colonel Donnelly moved DSG-2 to a position behind the 6th Marines, which was 15 kilometers northeast of Khanjar, 15 kilometers southwest of the border, and 7 kilometers from the 2d Marine Division Command Post.<sup>449</sup> DSG-2's new combat service support area became known as the Ponderosa.<sup>450\*</sup> On 19 February, the 8th Marines moved to its final preattack positions, 10-15 kilometers southwest of the Kuwaiti border. Lieutenant Colonel Head moved MCSSD-28 to a new location to support the 8th Marines. The mobile was located 6 kilometers southwest of the regimental headquarters, 7 kilometers south of the Ponderosa, and 10 kilometers east of Khanjar.<sup>451</sup>

*Pushing Forward to the Ground War: Final Plans,  
Preparations, Problems, and Positions*

*At the end of those [last] two weeks we had 15 days of supply at Khanjar, three days with each of the direct support groups, and a day with each of the mobile combat service support detachments—in addition to whatever the divisions were carrying themselves.*<sup>452</sup>

*The Direct Support Command*

The logistics “center of gravity” for I MEF’s imminent ground attack was Khanjar, which reached General Krulak’s stockage goal of 15 days supply on 20 February. From Khanjar, Krulak planned and then pushed supplies and capabilities as far forward as possible to give the divisions every advantage to defeat the enemy. To replenish each of the artillery regiments with the divisions, the DSC and DSG-1 planned to deliver ammunition for the preparatory fires and for the assault at the first obstacle belt. To sustain the attack, every firing battery in I MEF would advance into Kuwait accompanied by ammunition trucks from the DSC and both DSGs. After crossing the first obstacle belt, the DSGs would drop the ammunition between the belts to be used in the artillery bombardment on the second line of obstacles. The DSC’s trucks would move with the artillery to the far side of the second barrier line to support subsequent operations. When the DSC trucks returned, General Krulak planned a transfer point at Al Jaber Air Field, MEF Objective 1, to facilitate the capture of MEF Objectives 2 and 3.<sup>453</sup> For

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\*Col Donnelly commented that pilots named DSG-2’s combat service support area “the Ponderosa.” The Ponderosa was the ranch in the popular 1960s western television show “Bonanza.” According to Col Donnelly, “I was told that during air briefings, because the circular shape of DSG-2’s position resembled an enormous wagon wheel, the DSG-2 position became a recognized vector for pilots. Consequently, pilots began referring to the DSG-2 site as the Ponderosa.” (Donnelly comments)

emergency situations, the DSC's landing support detachment pre-staged MREs, fuel, and 40 ammunition supply blocks for rapid helicopter resupply.<sup>454</sup>

Table: The artillery ammunition support plan

Event	Mode of Supply	Responsible for Delivery to 10th Marines	Responsible for Delivery to 11th Marines
Preparatory Fires/ Assault on 1st Obstacle Belt	Pre-G-Day Lay-Down	DSC	DSC/DSG-1
Assault on 2d Obstacle Belt	Mobile Load	DSG-2	DSG-1
Targets Immediately Beyond the 2d Belt	Mobile Load	DSC	DSC
Subsequent Targets	Mobile Load	10th Marines	11th Marines

With the build up at Khanjar almost finished, the DSC turned to stocking CSSD-10 and DSG-2 with three days of water, MREs, fuel, lubricants, and two days of ammunition.<sup>455</sup> From the 18th to the 23d, the 8th Motor Transport Battalion hauled to DSG-2's dumps at the Ponderosa more than 180,000 gallons of fuel, 60,000 gallons of water, 43 LVS beds of ammunition, 74 pallets of MREs, 75 pallets of general cargo, two LVS beds of medical supplies, and two 5-ton truckloads of blankets for enemy prisoners of war.<sup>456\*</sup> At the same time, the transport battalion brought in over 216,000 gallons of fuel, 102 LVS beds of ammunition, 83 pallets of packaged oils and batteries, 78 pallets of medical supplies, and 5 pallets of repair parts to create the necessary supply stocks at CSSDs -10 and -13.<sup>457</sup>

General Krulak placed both of his engineer support battalions forward with the divisions for the attack. He ordered the 7th Engineer Support Battalion to help the 1st Marine Division while the 8th supported the 2d Division. After completing Khanjar, both engineer support battalions also assisted the two DSGs by building ammunition supply points and blast berms at their new positions. To support the initial attack and to later supply the MEF in Kuwait, Captain William Hatton's Company A, 8th Engineer Support Battalion, manned mostly by Reserves, completed a 35-kilometer, four-lane road, known as the Khanjar

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\*"Bed" was a measurement term commonly used to denote a trailer load of cargo. The use of LVSs to haul tandem trailers strengthened the use of the word "bed," as opposed to "truck load," since one prime mover or truck could haul two trailers or "beds." (Woodson and Songer intvw, 19Mar96)

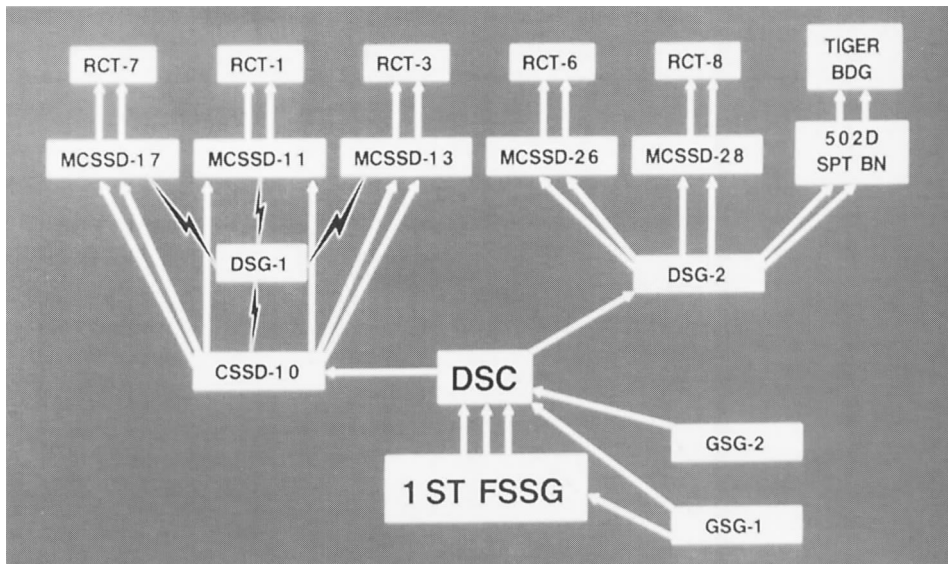


Photo courtesy of LtGen James A. Brabham, Jr.

*A briefing slide explains the 1st FSSG distribution system in the Persian Gulf.*

Expressway, from Khanjar to the Saudi berm. The three- to four-meter high berm ran parallel to the border on the Saudi side and served as a point of reference as well as an obstacle to be crossed.\* On 21 February, the 7th Engineer Support Battalion began slicing through the Saudi berm and the next day, dug in the 11th Marines' artillery while under fire.<sup>458</sup> Also on the 21st, Captain Hearnberger led his Company B, 8th Engineer Support Battalion, which had been assigned to the 2d Marine Division since early February, to the Saudi berm in front of the Tiger Brigade. Hearnberger's engineers punched nine 50-meter-wide holes in the berm to confuse the enemy about the location of the 6th Marines attack.<sup>459\*\*</sup>

### *Direct Support Group 2*

On 21 February, Colonel Donnelly briefed DSG-2's concept of support to General Keys, who approved the plan.<sup>\*\*\*</sup> The DSG planned to top off the 2d Marine Division with water and fuel prior to the assault, send artillery ammuni-

\*The Saudi berm was "built by the Japanese for the Saudi government...it was made by bulldozing the desert sand into a continuous wall, attaining a height of three to four meters in places. It followed the Saudi-Kuwaiti border from between 1-5 kilometers on the Saudi side and was visible from 10 kilometers away. The berm provided excellent concealment to forces just behind it, and a good vantage point from which to observe Kuwait." (2dMarDiv ComdC, 1Jan-13Apr91, Sec 2)

\*\*To deceive the Iraqis on the location of the 2d Marine Division attack, engineers cut 18 holes through the berm between 20 and 22 February. Only the six slots in front of the 6th Marines were intended for use. (Cureton, *With the 2dMarDiv*, p. 38)

\*\*\*DSG-2's staff briefed the concept of operations to BGens Krulak and Russell H. Sutton, the Assistant Division Commander of the 2d Marine Division, on 23 February. (Donnelly comments)



Photo courtesy of Maj Adrian W. Burke

*Capt Adrian W. Burke and a small reconnaissance party look through high-powered binoculars at Iraqi-held Kuwait from the Saudi berm. Japanese engineers built the three- and four-meter-high berm just inside Saudi Arabia and parallel to the Kuwaiti border. The Marines used the berm for observation, concealment, and as a point of reference.*

tion to the 10th Marines, establish a forward medical capability, and project transfer points in Kuwait. As the 2d Marine Division moved to the attack, Donnelly intended to establish RRP's at each of the three breach assembly areas so that attacking units could obtain water and fuel. He designated Captain Matter, DSG-2's motor transport officer, to establish the RRP's on 22 February. To medevac wounded after the assault on the breaches, Colonel Donnelly aimed to locate a collection and clearing station, under First Lieutenant Antonio Colmenares, DSG-2's assistant operations officer, inside Kuwait near the first line of obstacles, and on the 23d, ordered the lieutenant to stage his new command south of the Saudi berm.<sup>460\*</sup> To support the artillery, the DSC loaded 20 LVSs with artillery ammunition to travel through the breaches with the 10th Marines. In addition, Donnelly sent five LVSs with munitions and repair parts to support the Tiger Brigade. The DSG-2 commander assigned his remaining 10 LVSs to Lieutenant Colonel Hering, the DSG's executive officer, and directed him to establish a transfer point north of the second breach and later south of MEF Objective B at Al Jahra. The transfer points would distribute fuel, water, and MREs and provide maintenance and ground medical evacuation of casualties.<sup>\*\*</sup> On the 23d, Hering had his convoy inside the Ponderosa ready to move out.<sup>461</sup>

As did his fellow commanders in the 6th Marines, Lieutenant Colonel

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\*Col Donnelly commented that "Casualties were to move to the rear by lifts of opportunity. This guidance came from both the DSC and the division's assumptions. It seemed prudent to establish a medical collection point as close to the breach as possible . . . ." (Donnelly comments)

\*\*Col Donnelly added that, "No resupply or forward movement from DSG-2 was envisioned for the first 18 hours." (Donnelly comments)

Wittle used the last days before the attack to prepare his unit for war. MCSSD-26 loaded one day of ammunition; 25,000 gallons of fuel; 20,000 gallons of water, of which 6,000 was non-potable to be used for decontamination purposes; batteries; packaged oils and greases; medical supplies; and 16 pallets of MREs. M870 heavy equipment trailers pulled by LVSs carried the D-7 bulldozer and 10-ton Terex forklift, while smaller forklifts and the 7-1/2 ton crane followed behind the trucks under their own power. To recover vehicles and to medevac people, the mobile had an M936 wrecker, M88A1 tank retriever, assault amphibious vehicle retriever, an LVS 48/15 wrecker, and six HMMWV ambulances. MCSSD-26 also carried collection and clearing, helicopter support, maintenance contact, and the newly joined graves registration teams. The latter capability consisted of 12 personnel led by Sergeant John M. Kananowicz.<sup>462</sup> Lieutenant Colonel Wittle divided MCSSD-26 into two serials consisting of 35 vehicles each, and placed Major Clarke, the executive officer, in charge of the second serial while he stayed with the first.<sup>463</sup>

The 6th Marines, like all Marine Corps ground combat elements, carried a significant array of combat service support capabilities. Prior to the assault, MCSSD-26 pushed two-days' ammunition, water, fuel, and MREs to the battalions of the 6th Marines. Between the 16th and 23d of February, MCSSD-26 pushed 12,000 gallons of water, 44 pallets of MREs, and 12,000 gallons of fuel daily to the regiment.<sup>464</sup>

MCSSD-26 had distributed these commodities to their companies or carried them in the battalion logistic trains. For example, the 1st Battalion, 6th

*The officers and noncommissioned officers of MCSSD-26 pose for their picture on 23 February. LtCol Wittle, the commanding officer, is in the middle of the front row. Moving to the right are Maj Charles Clarke, executive officer, and Capt Peter W. Warker, operations officer. Also pictured are members of a civil affairs group who arrived in time to have their picture taken before moving on to another location.*

Photo courtesy of Maj Peter W. Warker



Marines (mechanized), after distributing general supplies and one-day ammunition supply to its companies, hauled two-days' worth of MREs, 1,600 gallons of water, 16,232 gallons of fuel, and one-day's ammunition in its 42-vehicle train. In addition to basic supplies, the battalion took with it a cache of repair parts and an aid station. The infantrymen converted two amphibious assault vehicles into ambulances to evacuate the wounded who would be carried to the ambulances on stretchers by the cooks. The cooks also served in decontamination teams and provided additional security. MCSSD-26 delivered supplies directly to the battalion logistic convoy which moved 500-1000 meters behind the unit's command element.<sup>465</sup>

Located 18 kilometers southwest of the border, Lieutenant Colonel Head's MCSSD-28 loaded trucks to support the 8th Marines who would follow the 6th Marines and the Tiger Brigade into Kuwait on the second day of the war. MCSSD-28 carried 40 pallets of MREs; 10,800 gallons of potable water; 6,000 gallons of non-potable water for decontamination; 19,500 gallons of fuel, packaged lubricants and oils; and one-day's worth of ammunition. Like MCSSD-26, MCSSD-28 provided on-call helicopter support, collecting and clearing, maintenance, vehicle recovery, and graves registration support. Unlike MCSSD-26, MCSSD-28 did not have a TOW section for protection, but planned to travel with the regimental logistics train and to carry 100 infantrymen from the 8th Marines. This arrangement strengthened MCSSD-28's defenses, which consisted of machine guns, Mk 19 grenade launchers, and AT-4 anti-tank systems. On the 23d, Lieutenant Colonel Head lined-up MCSSD-28 for the attack into Kuwait.<sup>466</sup>

### *Direct Support Group 1*

After moving Task Force Taro to Qaraah on 16 February, General Myatt completed his plan of attack.<sup>467</sup> Myatt ordered Task Force Ripper, responsible for the division's main effort, to attack towards Al Jaber Air Base and Task Force Papa Bear to assault on Ripper's right flank. The 4th Marines, now called Task Force Grizzly, and Task Force Taro were to infiltrate the first line of obstacles on the division's flanks prior to G-day. The foot-mobile Grizzly and Taro would guard the 11th Marines as it moved into Kuwait to fire in support of the infantry while Grizzly and Taro protected Ripper and Papa Bear's flanks. The change to Taro's mission caused Colonel Powell, the DSG-1 commander, to modify CSSD-13's role from direct support of Taro to general helicopter-resupply support of the division. Powell ordered Captain Ritchie to focus on resupplying Taro, Grizzly, and Shepherd.

Not deterred by the additional burden of supplying two more task forces, Captain Ritchie found that CSSD-13's experience with Taro prepared his command for its larger mission. The support packages, which CSSD-13 organized for Taro, were usable by Grizzly and Shepherd. CSSD-13 made a list of the resupply packages, assigned brevity codes, and circulated the list within the division and DSG-1. The use of brevity codes allowed units to call quickly for helicopter resupply and minimize radio traffic over the shaky communications system. For

example, if Task Force Grizzly wanted a day's worth of ammunition for an infantry company (Brevity Code - "Shark") it would send the following brief message—"CSSD-13, "Shark" at Grid 12345678." To enhance communication, Captain Ritchie sent liaison officers to establish radio contact with Task Forces Grizzly, Taro, and Shepherd. He then analyzed the division's scheme of maneuver, while Captain Kenneth M. Brown, the CSSD's operations officer, scheduled daily resupply missions with the 3d MAW's helicopter squadrons. Colonel Powell assisted Captain Ritchie by sending all available landing support equipment to CSSD-13. To back-up the CSSD in case of limited helicopter support, Colonel Powell directed MCSSDs -11 and -17 to be prepared for on-order missions to support the infantry task forces.<sup>468</sup>

Besides the last-minute adjustment of missions, ammunition planning remained a lingering problem within DSG-1. The large amount of artillery ammunition required by the 11th Marines and the uncertainty surrounding the daily allowances of non-artillery munitions were major concerns. Major Lucenta, CSSD-10's operations officer, calculated that it took 88 LVS-loads to haul one-day's worth of artillery ammunition for the regiment. This caused complications since CSSD-10 had only 70 LVSs and seven 5-ton trucks to move ammunition to the 11th Marines, resupply MCSSDs -11 and -17, and to relocate itself. The CSSD simply did not have enough vehicles to do the job easily.<sup>469</sup> The second hurdle involved ammunition allowances. Division units requested amounts of ammunition that exceeded those allowed by a 1985 Marine Corps order, which resulted in the I MEF ammunition officer disapproving the requests.\* Frustrated that a six-year-old Marine Corps order was viewed as more accurate than their judgment, the 1st Division logistic officers continued to resubmit their requests which were duly disapproved. DSG-1's load planners were caught between the division and the MEF, since they had to draw and deliver the division's ammunition, no matter what amount was approved. Finally, the MEF ammunition officer declared all division calculations invalid and together with the division's ammunition officer computed a new set of allowances which went into effect on 16 February. Unsatisfied, task force ammunition planners continued to submit requests for additional allotments.<sup>470</sup>

The major burden of DSG-1's pre-G-day preparations and its post-G-day ability to support extended operations, fell on CSSD-10. To execute his mission, Lieutenant Colonel Kelly planned to move CSSD-10 near the border to OP-4, four days prior to the attack. From the new position, he would build up three-days' supplies, set up a collecting and clearing company to treat casualties resulting from the attack on the first obstacle belt, and establish a decontamination site. From OP-4, the CSSD would send five ammunition trucks to each battery of the 11th Marines to support the division's assault on the second belt. Lieutenant Colonels Kelly and Leonard M. Supko, the 11th Marines' logistics officer, spent a good deal of time coordinating the artillery ammunition plan which would tie up most of CSSD-10's trucks for the first day of the war.

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\*Marine Corps Order 8010.1D, Class V (W) Supply Rates for Fleet Marine Force Combat Operations.





Photo courtesy of Maj Adrian W. Burke

*In the field, MCSSD-11 Marines "lived like Grasshoppers." in an environment providing nothing but sand and air to work with. Everything needed to fight and survive had to be carried by the forces deployed. This reality remained throughout the conflict.*

To support subsequent operations, Lieutenant Colonel Kelly planned to move elements of CSSD-10 into Kuwait. Kelly organized a "medical mobile" consisting of six M997 HMMWV, two busses configured by GSG-1 as ambulances, a shock/trauma platoon, a chaplain, and a security element, to evacuate the high number of casualties expected to occur at the second obstacle belt. Ensign William C. Hancock, the executive officer of Collecting and Clearing Company A, led the medical mobile. Because most of its trucks were hauling artillery ammunition, CSSD-10 would not be able to resupply MCSSDs -11 and -17 until the second day of the war. After retrieving the ammunition trucks and resupplying the MCSSDs, Kelly intended to move north of the second obstacle belt. Expecting heavy casualties from the fight at the Al Jaber Air Base, CSSD-10 planned to set up a collecting and clearing company to treat the wounded.<sup>471</sup> To sustain the final attack on Kuwait International Airport, Kelly aimed to move to a position 15 kilometers southwest of it. Even with the plan in place, Kelly spent 80 percent of his time wrestling with ammunition resupply and casualty evacuation matters.<sup>472</sup>

Colonel Powell, the DSG-1 commander, continued to meet and brief General Myatt and his staff to ensure that the division's logistics priorities were met and that required trade-offs were understood and accepted. In consonance with Myatt's priorities, Powell designated Task Force Ripper as DSG-1's main focus for combat service support. The DSG commander used consumption data compiled during the previous months to convince General Myatt and his commanders to reduce the amount of fuel, water, and MREs carried by MCSSDs -11 and -17.\* These cuts saved space on trucks which were used to transport more ammunition and to increase DSG-1's ground medevac capabilities.<sup>473</sup> For pur-

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\*MCSSD -11 and -17 dropped the amount of water carried per man per day to 1.5 gallons from 6 and decreased the number of MREs per man per day to one from three. DSG-1 used a planning factor of 60,000 gallons of fuel per day instead of the division's estimate of 120,000.



poses of efficiency, CSSD-10 reduced from 35 LVS bed loads to 17 the amount of equipment deployed by a collecting and clearing company.<sup>474</sup> To save space, DSG-1 dispensed with most of its unit equipment, and, according to Captain Jeffrey J. Morsch, DSG-1's historian, "lived like grasshoppers out there in the sand." Throughout the planning process, Colonel Powell continued to update and obtain General Myatt's understanding and concurrence of his plans. On 20 February, during an extensive sand table exercise, Powell, together with the division's other task force commanders, briefed his final plan of action to Myatt and his staff.<sup>475</sup>

In addition to dealing with his customers, Colonel Powell spent a good portion of his time keeping General Krulak and the DSC staff informed of his intentions. Powell visited the DSC at Kibrit and at Khanjar about five times a week, attended meetings, and kept the DSC current on his plans, activities, and problems. General Krulak enhanced communication by his numerous visits to the DSG headquarters and to the CSSDs and MCSSDs. As early as 7 February, Colonel Powell and his commanders presented their general support plan to General Krulak and received his approval. Throughout the remainder of the month, Powell kept the commanding general aware of such items as the modification to CSSD-13's mission. An unresolved chronic issue remained — the shortage of equipment, especially trucks, Position Locating and Reporting Systems (PLRS), Global Prepositioning Systems (GPS), night vision goggles, and anti-tank weapons. Powell pressed the issue with Krulak, who guaranteed that he would push additional equipment to DSG-1 after the DSC set up at Khanjar.<sup>476</sup>

During the last days before the ground attack, General Krulak made good on his promise and forwarded equipment and supplies. DSC gave DSG-1 10 LVSs and trailers; 5 M970 5,000-gallon refuellers; 10 Mercedes Benz water tankers, which provided CSSD-10 the ability to carry 66,000 gallons of water at one time; and materials-handling equipment to quadruple CSSD-10's capabilities.<sup>477</sup> On the 22d, the DSC sent CSSD-10 boxes of new cargo straps and banding material. After six months in the desert, the cargo straps that came with the trailers were worn-out, causing as much as 50 percent of a load to bounce off the backs of trucks and trailers traversing rough desert roads. Just prior to the assault, General Krulak sent CSSD-10 PLRS, GPS, and night vision goggles.<sup>478\*</sup>

Early on the 19th, Lieutenant Colonel Kelly sent his security force and engineers one kilometer from the border to OP-4, near the site of Task Force Shepherd's victory over the Iraqis in late January. Using 13 bulldozers, the engineers dug in positions and were joined over the next four days by the remainder of the CSSD and CSSD-13.<sup>479</sup> CSSD-13 set up next to CSSD-10's ammunition dump, where Captain Kava laid out, dug in, and bermed CSSD-13's dumps and camps. Two companies from Task Force Grizzly screened OP-4 and Task Force Shepherd bolstered the defenses by collocating its logistics train and eight LAV-25s with CSSD-10.<sup>480</sup> The CSSD's security platoon, under Captain Dennis

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\*In addition to providing the DSGs' equipment, the DSC's supply detachment exchanged 439 items of working equipment for broken items with the owning units. (DSC ComdC 16Feb-12Mar91, Sec 2)

Muller, prepared to repulse any raid by Iraqi special operations forces and everyone was wary of the Iraqi artillery threat, which was demonstrated by a barrage fired at a Marine reconnaissance team, just 1,000 meters from the CSSD.

The 23d was a busy day for CSSD-10 as capabilities were fine-tuned and supplies were picked up, pushed, and pulled. The CSSD-10 truck detachment completed delivery of 1,700 rounds of artillery ammunition to the 11th Marines, then loaded 12,000 more rounds to move with the regiment into Kuwait.<sup>481</sup> Throughout the day, the 8th Motor Transport Battalion supplied water, fuel, MREs, and ammunition to OP-4, while Kelly sent convoys to Khanjar to pull fuel and water, and to Kibrit for water. By the end of the day, CSSD-10 had 97,692 meals, 62,000 gallons of fuel, 24,800 gallons of water, and one-day's worth of ammunition on hand. CSSD-10's ammunition technicians organized munitions into task force packages for easy distribution to the mobiles and the military police completed final preparations at the enemy prisoner of war transfer point. Although not a combat service support function, CSSD-10 prepared a hasty wash-down site to decontaminate any units attacked by chemical weapons at the first obstacle belt.<sup>482</sup> Major Lucenta distributed to the convoy commanders five night vision goggles, three Position Locating and Reporting Systems (PLRS), and one Global Positioning System (GPS), forwarded by General Krulak. One collecting and clearing company opened another operating room and the second company boxed its equipment in preparation for its move through the breaches in the minefields on the following day.<sup>483</sup> At 2200, the medical mobile of HMMWV ambulances and busses departed OP-4 with Colonel Powell in the lead.<sup>484</sup>

On the 23d, as well, CSSD-13 laid out helicopter deliverable resupply

*A 1st FSSG briefing slide shows the disposition of Marine forces in February 1991.*

Photo courtesy of LtGen James A. Brabham, Jr.



packages and scheduled helicopters. CSSD-13's operations officer, Captain Brown, built 4,000-pound packages that could be lifted by a Boeing CH-46 Sea Knight helicopter. To use the massive lift capability of the Sikorski CH-53E Sea Stallion helicopter, Brown planned to sling more than one package under the giant chopper. Captain Ritchie, the CSSD commander, ordered that a block of MOPP equipment be ready to fly to any unit attacked by chemical weapons.<sup>485</sup> Brown scheduled one resupply per day for each of the task forces, knowing that the foot-mobile units would take what they needed and leave what they could not carry. First Lieutenant Darryl L. Smith, the CSSD landing zone support officer, organized the landing zones by laying out resupply packages and netting loads just prior to a mission.<sup>486</sup>

Two days before, MCSSD-17 had followed Task Force Ripper to its attack positions 15 kilometers southwest of the Kuwaiti border. Captain Winter, the mobile commander, still short of trucks and uncertain about the ammunition requirements for the task force, used the last few days to obtain more equipment and to try to improve his security. He informally tried and failed to obtain TOW missile vehicles and he formally requested and received approval for, but never obtained, four amphibious assault vehicles from the Prepositioned War Reserve. Winter wanted to use the amphibious assault vehicles as replacement items and to haul the infantry from Company C, 1st Battalion, 25th Marines, which he had agreed to transport. Instead, the CSSD commander used his trucks to transport the infantry whose presence enhanced security, but reduced his ability to haul supplies. Benefitting from the DSC's pre-G-day equipment reinforcements, MCSSD-17 received one of the 5,000-gallon refuellers, which increased its fuel-hauling capacity to 23,500 gallons and a couple of LVSs which offset the loss of trucks that Winter gave the task force to carry line-charges for the breaching operation. In addition, MCSSD-17 received a crane which helped ease the loss of two, broken down, of its three RT 4000 forklifts.<sup>487</sup>

On the 23d, while Task Force Ripper moved to the berm, MCSSD-17 picked up supplies at OP-4 and then delivered fuel, water, and ammunition to the task force battalion logistics trains. With the exception of the 3d Tank Battalion, Colonel Fulford, the task force commander, consolidated all the battalion logistics trains into a single task force convoy for movement through the obstacle belts. MCSSD-17 delivered 6,000 gallons of water, 4,500 gallons of fuel, and one-day's worth of ammunition to the 1st Battalion, 7th Marines, and similar amounts to Ripper's other battalions.<sup>488</sup> The task force carried two days of supply in most commodities, four days of MREs, a basic allowance, and a day's allowance of ammunition. Late in the evening, Captain Winter sent trucks to OP-4 to pick up the additional amounts of ammunition that Ripper wanted and that I MEF had earlier disapproved. The delayed loading of the ammunition diverted MCSSD-17's focus on supporting ground operations the following day.<sup>489</sup>

The last day before the ground war started early for MCSSD-11. After adjusting loads and dealing with some maintenance problems, First Lieutenant Juan C. Osorno's Bravo Train departed for CSSD-10 at 0400 to pick up ammunition for delivery to Task Force Papa Bear. Later in the morning, the Bravo Train

transferred 280,000 rounds of small arms ammunition, 30 TOWs, 25 Dragons, 45 AT-4s, and 40 LAAWs to the task force, whose battalion logistic trains remained with their units. At 0800, the Alpha Train, commanded by First Lieutenant Delaney C. Williams, drove to CSSD-10 to pick up fuel, water, and MREs, then distributed the supplies to the task force. After completing the resupply missions, both trains returned to CSSD-10 to load a day's worth of supplies to carry into Kuwait. While MCSSD-11's convoys picked up supplies, Captain Burke, the mobile commander, and his key personnel went to meetings and discussed Papa Bear's final combat plan, ammunition resupply, prisoner of war handling, and casualty evacuation procedures. Late in the evening, Colonel Powell, leading the medical mobile and a communication retransmission team, joined MCSSD-11 which was ready to move into Kuwait. At midnight, Burke dispatched a section of trucks from the Alpha Train to CSSD-10 to pick-up Papa Bear's additional block of ammunition.<sup>490</sup>

### *Combat Service Support Detachment 91*

I MEF's move to the west took away CSSD-91's advantage of being centrally located to both divisions. Despite the extension of the distance required to transport prisoners from the battle zone, CSSD-91 remained at Kibrit, continued to prepare for war, and received unexpected help from the U.S. Army. Because of Saudi desires to handle Iraqi prisoners, the U.S. Army found itself with a spare military police battalion from the Puerto Rican National Guard. ArCent sent the 350 soldiers of the 34th Military Police Battalion (-) to CSSD-91, where Lieutenant Colonel Sparrow assigned them to guard Iraqis.<sup>491</sup> In addition, the Army drivers responsible for bussing prisoners to Army compounds, lived at CSSD-91. By the start of the ground war, the size of CSSD-91 reached 850 officers and enlisted men, of whom two thirds were soldiers. Also during the month, English-speaking Kuwaitis joined the CSSD which increased the number of translators to 25. Sparrow was glad to have the extra help, but took measures to ensure that vengeful Kuwaitis would not harm captured Iraqis. As the ground war drew nearer, small numbers of surrendering and captured Iraqis were smoothly processed through the camp and transported south. GSG-2 at Mishab sent the CSSD fuel and water and the 1st FSSG pushed forward rice, beans, and blankets to prepare for the huge influx of expected prisoners. Right before the start of the ground war, the 1st FSSG assigned CSSD-91 the additional mission of transporting captured Iraqis from the division holding areas in Kuwait to Kibrit. This new responsibility sent Lieutenant Colonel Sparrow unsuccessfully scrambling for trucks and drivers at the last minute.<sup>492</sup>

### *MWSG-37 and the Seabees Final Preparations*

During the last week before the ground war, the 3d NCR completed projects, unit relocations, and developed plans to move into Kuwait behind the ground forces. When the DSC engineers moved to the berm, NMCB-24 picked up

the responsibility for maintaining the Al Khanjar Highway which connected CSSA-2 with the Saudi berm. After G-day, Captain Johnson planned to move his forward headquarters into Kuwait and collocate with the MEF headquarters at Al Jaber Air Base. NMCBs -5 and -24 would advance with him to Al Jaber, build the MEF headquarters and a Seabee Camp, repair runways and restore services at Al Jaber, Kuwait International Airport, and As Salem Air Base, which was located west of I MEF's zone of action. NMCB-5 would work from Al Jaber and NMCB-24 would use Kuwait International airport as a base.<sup>493</sup>

The week prior to G-day, MWSG-37 completed its preparations to support the ground war. MWSS-374 modified the aviation ammunition supply point and refuelling capabilities at Jubayl Naval Air Facility which allowed 3d MAW's F/A-18 jets to rearm and refuel 170 kilometers closer to Kuwait than Shaikh Isa. On the 20th, Colonel Coop sent MWSS-271 and -273 additional equipment, stripped from the southern MWSSs, and on the 23d, established two FARPs on the border to support helicopter operations. CSSD-10 assisted MWSS-271's 28-Marine mobile FARP become operational next to CSSD-13.<sup>494\*</sup> After the capture of MEF Objectives A and C, Colonel Coop planned to establish a FARP at Al Jaber Air Base to refuel both helicopter aircraft groups and to send MWSS-374 to Kuwait International Airport.<sup>495</sup>

### *Conclusion*

*Above all else, the division must not unnecessarily lose momentum due to logistics. All of our actions must be driven by this requirement.—  
Col Alexander W. Powell*

By day's end on 23d February, the DSC had pushed its assets as far forward as possible to support the coming assault. Trucks from the 8th Motor Transport Battalion and DSG-1 and -2 were forward with the artillery regiments and all MCSSDs were staged with their regiments and task forces, ready to roll into Kuwait. Elements of DSC's engineer battalions were on the point of the attack with the division engineers, prepared to breach the Iraqi defenses while the bulk of both engineer support battalions were ready to move into the breach. MWSG-37 pushed FARPs forward to refuel 3d MAW's helicopters and the Seabees were staged to repair Kuwait's airfields. At midnight on the 23d, I MEF was logistically ready to throw Iraq out of Kuwait.

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\*According to Col Kelly, the FARP arrived unexpectedly and "needed everything." CSSD-10 brought them under its wing and provided them MREs and dug them in. (Kelly comments)

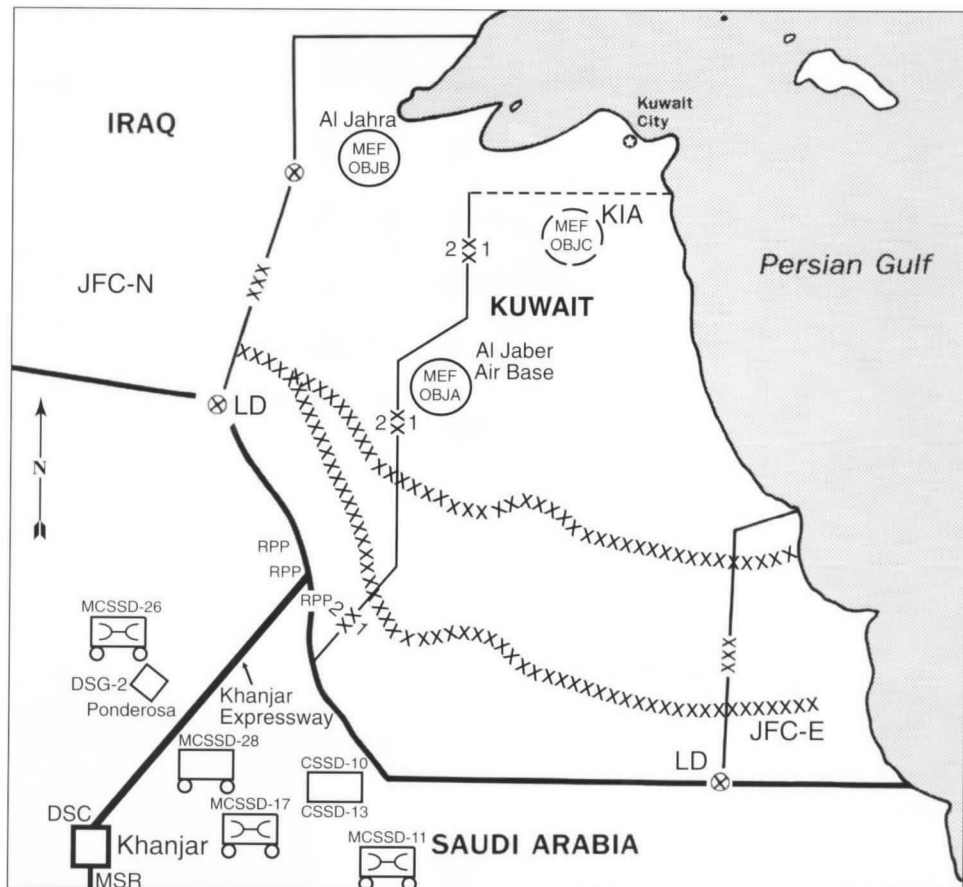
## The Ground War: 24-28 February 1991

### *G-Day: 24 February 1991*

*I MEF began the assault at 0400, aimed directly at its ultimate objective, al-Mutl'a Pass (aka Al Jahra) and the roads leading from Kuwait City, 35 to 50 miles to the northeast. I MEF faced the strongest concentration of enemy defenses in theater.<sup>496</sup>*

In the early hours of 24 February, I MEF's assault forces crept towards the border under the cover of darkness and crossed into Kuwait to breach the double lines of Iraqi obstacles. In the 1st Marine Division's zone of action, combat engineer teams, including Company A, 7th Engineer Support Battalion, from the DSC, cleared the path for Task Forces Ripper and Papa Bear, who were to launch the main attack, while Task Forces Taro and Grizzly protected the division flanks. MCSSDs -11 and -17 followed closely behind the two mechanized task forces, while the 11th Marines, with its fleet of DSC and CSSD-10 ammunition

### DSC positions at the beginning of G-Day: 24 February 1991



trucks, fired artillery missions and moved forward into Kuwait. To the west, in the 2d Marine Division zone of action, Task Force Breach A, which included Company B, 8th Engineer Support Battalion, from the DSC, advanced in front of the 6th Marines and MCSSD-26, while the 10th Marines fired artillery and drove forward with its fleet of ammunition trucks provided by the DSC and DSG-2. The ground war had begun and the DSC's forces were far forward and intermingled with the assault elements.

### *The 2d Marine Division Zone of Action*

Throughout the night, the 6th Marines topped off with water and fuel at DSG-2's RRP's, and moved to penetrate the Iraqi obstacle belts in Kuwait.\* At midnight, both serials from MCSSD-26 drove 15 kilometers east from RRP Stewart to tactical assembly areas seven kilometers from the Kuwaiti border. At 0420, Lieutenant Colonel Wittle, the MCSSD commander, leading Serial 1, linked up with Battery D, 2d Battalion, 10th Marines, in front of the breach lane marked Blue 3. About the same time, Major Charles J. Clarke, the MCSSD executive officer, leading Serial 2, had joined Headquarters Battery, 2d Battalion, 10th Marines, across from Blue 4. A little more than an hour later, engineer teams attached to each of the three assault battalions began cutting through the first obstacle belt. Captain Hearnberger's Company B, 8th Engineer Support Battalion, drove its armored Ninja Bulldozers 16 kilometers from Saudi Arabia straight into the first minefield and, at 0600, began proofing, clearing, widening, and marking the breach lanes.<sup>497\*\*</sup> In order to keep the 6th Marines moving, Staff Sergeant Daniel A. Kur, a breach team leader in Company B's first platoon, picked up mines with his bare hands and removed them from the lane.<sup>498\*\*\*</sup>

At 0500, both serials from MCSSD-26 started towards Kuwait, crossed the border at 0630, and entered the breach at 0715. Serial 1 shifted to Red 2, because Blue 3 was closed, while Serial 2 proceeded as planned through Blue 4. At 0905, both serials came under artillery fire which lasted until 0945. While passing over one of the high-pressure gas lines that zigzagged through the area, a CUCV pickup truck belonging to Serial 1 hung up on the pipeline. The LVS in front of the vehicle immediately tried to pull the CUCV across, but snapped its tow line in the effort. Then, a second LVS pushed the stranded vehicle forward,

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\*DSG-2's RRP's were augmented by 5,000-gallon refuelers from the 8th Motor Transport Battalion. (Woodson intvw, 19Mar96)

\*\*The Company B bulldozers moved "in-stride" directly into the paths blown by the 2d Marine Division's line charges and plows and proofed, smoothed, and widened to 15 feet the 100-meter-long lane through the breach in two minutes. Company B used two armored Ninja Bulldozers with the wedge shaped blades fabricated by the Zahaid Caterpillar distributor of Jubayl and two straight-blade models to accomplish its mission. (Skipper comments)

\*\*\*Usually, the bulldozer blades pushed the mines harmlessly to the side of the lanes where engineers destroyed them with TNT charges, after traffic cleared the lane. (Skipper comments)



Photo courtesy of LtGen James A. Brabham, Jr.

*A line of Iraqi mines in Kuwait greeted I MEF's attacking elements. The Iraqis laid two series of minefields which elements of the 7th and 8th Engineer Battalions helped to breach.*

but bent the hydrogen-sulfide pipeline without freeing the CUCV. Not wanting to rupture the pipeline and cause an explosion, Lieutenant Colonel Wittle halted the operation and ordered an M936 wrecker to lift the CUCV off the obstruction. After freeing the pickup truck, the mobile's M88A1 tank retriever used its bulldozer blade to push sand over the pipe, which allowed the serial and subsequent traffic to pass. The entire vehicle recovery and route repair operation took 12 minutes.<sup>499</sup>

After emerging from the minefield at 1140, Serial 1 headed for a pre-planned position, but stopped after one kilometer because of a tank battle to its front and right flank.\* While halted, Serial 1's Marines exchanged fire with the enemy and captured 27 prisoners to include the commanding general of the *14th Infantry Division (Commando)*. MCSSD-26 seized three dozen weapons, a cache of ammunition, maps, overlays, and the division's communications center including the enemy's call signs and frequencies.\*\* After Serial 2 arrived, Lieutenant Colonel Wittle established RRP Fournier, named after Captain David E. Fournier, MCSSD's tactical coordination officer. Wittle ordered his troops to dig in using the Iraqi trenches they had just cleared and begin resupplying individual vehicles and units passing through the area. MCSSD-26 stayed at RPP Fournier until the next morning, ducking incoming Iraqi artillery fire, dispensing water, fuel, and MREs, and treating the injuries of six Marines and four Iraqi wounded.<sup>500</sup>

After the 6th Marines moved into Kuwait, the 2d Tank Battalion, the

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\*LtCol Wittle monitored the regimental radio nets and was fully aware of the tactical situation facing the 6th Marines.

\*\*MCSSD-26 captured a ZPU-1 antiaircraft gun which was returned to the United States and is displayed outside of the office of the Commandant of the Marine Corps at the Pentagon. (Warker comments)





Photo courtesy of Maj Peter M. Warker

*A TOW-mounting HMMWV leads MCSSD-26 through an Iraqi minefield. The low thin cloud that parallels the horizon is the smoke from an exploding line charge used to clear a path through the mines.*

division's reserve, topped off at DSG-2's RPPs and moved into the first minefield. Following closely behind the tanks, Lieutenant Colmenares, commander of DSG-2's collecting and clearing station, and his security officer led 15 military policemen and some communicators to a point in front of the entrance to Red 1.<sup>501</sup> At this location, Iraqi soldiers opened fire on the group which returned suppressing fires, captured 45 Iraqis, and then established radio contact with the Ponderosa and a medical treatment area.<sup>502</sup> Meanwhile, the command elements of the 2d Marine Division and the 10th Marines, refreshed at DSG-2's RPPs, advanced into the breach, and were followed into Kuwait by the Tiger Brigade. While the scheduled waves of the division advanced through the obstacle belts, Lieutenant Colonel Hering, commanding officer of DSG-2's northern transfer point, waited all day and night with his convoy, seven kilometers west of the Kuwait border.<sup>503</sup> Back at the Ponderosa, Major Sass, DSG-2's operations officer, obtained two 5-ton trucks from the DSC which evacuated the prisoners captured by Colmenares.<sup>504</sup>

At 0900, Lieutenant Colonel Head relocated his MCSSD-28 eight kilometers northeast of his assembly area, joined the 8th Marines combat train, and waited to move to the breach assembly area.<sup>505</sup> While at the new location, the mobile loaded 100 Marines belonging to the 2d Battalion, 4th Marines, and the 3d Battalion, 23d Marines. In addition to using MCSSD-28, Colonel Schmidt, the 8th Marines commander, hauled infantry on the trucks of the regimental logistics train, but still had to leave 50 Marines in the assembly area when the lead battalions advanced at 1530. Two hours later, MCSSD-28 departed with the regimental logistics train for a 17-kilometer road march to Assembly Area Blue B.<sup>506</sup> After arriving at 2200, MCSSD-28 tried to repair a CUCV pickup truck for the 1st Battalion, 8th Marines; ordered AAV parts from DSG-2 for the 2d Battalion, 4th Marines; and waited until morning to move into Kuwait.<sup>507</sup>

On the 24th, Lieutenant Colonel Skipper moved his jump command post and Companies A and C, 8th Engineer Support Battalion to the Saudi Berm between Blue Lanes 3 and 4. Skipper ordered Company C to punch a 50-meter



Photo courtesy of Maj Peter M. Warker

*An M1A1 Abrams tank of the 2d Tank Battalion races past MCSSD-26 in Kuwait.*

hole in the berm and Company A to extend the Khanjar Expressway through the new opening into Kuwait. While the two letter companies completed their tasks, the engineer battalion commander listened to the intelligence and operation nets, used his map and PLRS, pieced together an accurate picture of the tactical situation in Kuwait, and waited impatiently to move to Al Jaber Air Base and establish the DSC's transfer point.<sup>508</sup>

Table: DSC commands and commanders

DSG-1		DSG-2	
Command/Unit	Commander/OICS	Command/Unit	Commander/OICS
DSG-1	Col Alexander W. Powell	DSG-2	Col Thomas P. Donnelly, Jr.
Command Element	LtCol Leon S. Lusczynski	MCSSD-26	LtCol David L. Wittle
CSSD-10	LtCol Richard L. Kelly	MCSSD-28	LtCol James W. Head
CSSD-11	Capt Adrian W. Burke	Northern Transfer Point	LtCol John C. Hering
CSSD-13	Capt William H. Ritchie, III	RPPs	Capt Carl D. Matter
CSSD-17	Capt Edward J. Winter	Medical Mobile Retrans Team	1stLt Antonio Colmenares
Medical Mobile	Ensign William C. Hancock		
Retrans Team	Capt Jeffery J. Morsch		

*The 1st Marine Division Zone of Action*

At midnight, Task Force Ripper pushed in a wedge formation into Kuwait, overcame light resistance, and easily breached the first obstacle belt by mid-morning.<sup>509</sup> Delayed by the requirement to pull Ripper's additional ammunition from OP-4, MCSSD-17 departed Saudi Arabia behind schedule at 0615, but rapidly passed through the first obstacle belt abreast of the artillery and ahead of Ripper's logistics trains. While in the breach, the mobile ducked sporadic Iraqi artillery fire directed at Task Force Papa Bear which could be seen conducting breach operations to the east of Ripper.<sup>510</sup> At 1000, MCSSD-17 caught up with Ripper's command element and dropped off the Reserve infantrymen who established a prisoner of war camp between the obstacle belts. At 1125, Task Force Ripper penetrated the second minefield against light resistance and was greeted on the far side by a deluge of surrendering Iraqis. After passing through the second defense line at 1400, MCSSD-17 advanced to a position seven kilometers west of the breach and set up to support the attack on the Al Jaber Air Base. Captain Winter, the mobile commander, chose this position on the western edge of Ripper's zone of action to avoid the danger of ambush from the burning Burqan oil fields to the east. On arrival, Winter's first sergeant led a team that cleared nearby Iraqi positions and captured 35 prisoners of war, a large cache of weapons, and an Iraqi communications plan, which the Marines forwarded to CSSD-10.<sup>511</sup>

Less than three hours after Task Force Ripper departed for the first obstacle belt, Captain Burke ordered his MCSSD-11 to "move out" in two columns "echeloned right," "guns right," and "scouts right." In trace of MCSSD-11, Colonel Powell led CSSD-10's medical mobile and a communications retrans-

*MCSSD-11 traverses the breach. The smoke in the distance is from the burning oil wells that barely can be seen as small points of light on the horizon.*

Photo courtesy of Maj Adrian W. Burke



mission team. Almost immediately after starting, darkness forced the mobile commander to reform MCSSD-11 into a single and more controllable formation. After moving nine kilometers, the column stopped at 0520 to await its turn to move through the Saudi Berm. At 0800, MCSSD-11 fell in behind the 1st Tank Battalion's logistics train, crossed the berm, and reached Kuwait at 0936. At the border, Captain Burke left the convoy with two trucks carrying 800 rounds of 81mm mortar ammunition for the 3d Battalion, 9th Marines and looked for Task Force Papa Bear's logistics operations center. Before departing, he directed MCSSD-11 to move to a location 10 kilometers northeast of the border and wait for his orders. After driving 10 kilometers, Burke found the 3d Battalion, 9th Marines' field trains and transferred the mortar ammunition. He then drove northeast another five kilometers where he found Major Gary M. Reinhold, Papa Bear's logistics officer, controlling movement through the first obstacle belt. Told to move through the breach, Burke called forward the mobile, which had been rejoined by the Alpha Train's ammunition trucks with Papa Bear's additional ammunition.

Just forward of MCSSD-11's position, Captain Philip L. Salinas, commanding officer of Company A, 7th Engineer Support Battalion, directed the breaching, proofing, and marking of lanes in the first obstacle belt. Salinas and his engineer company were part of the Engineer Detachment, 1st Combat Engineer Battalion, assigned to Task Force Papa Bear. Major Joseph I. Musca commanded the detachment and placed Salinas in command of the Support Breach Team (SBT), which consisted of his company, and elements from the 1st Combat Engineer Battalion and the 3d Amphibious Assault Battalion. Half of the SBT rode in amphibious assault vehicles while the other half travelled in trucks. After the 3d Battalion, 9th Marines, and Company A, 1st Combat Engineer Battalion, penetrated the first obstacle belt in two places, the SBT breached and proofed two additional lanes and marked all thoroughfares with colored tape and chemical lights. At 1330, Salinas led the SBT to Papa Bear's field trains south of the second obstacle belt where it constructed a berm around the regimental aid station, and remained there until the next day.<sup>512</sup> Behind the SBT, the 7th Engineer Support Battalion moved into the first obstacle belt and improved and widened breach lanes throughout the 1st Marine Division's zone of action.<sup>513</sup>

While Captain Salinas' engineers marked the lanes, Captain Burke's MCSSD-11 crossed the first obstacle belt on lane 1, ahead of the 1st Battalion, 11th Marines. Stopping on the north side of the Iraqi minefield to wait for Papa Bears's logistics' operations center, MCSSD-11 set up a hasty defense and internally redistributed the ammunition brought forward by the Alpha Train for delivery to the Task Force. After waiting three hours and twice going to MOPP-4 due to erroneous reports of chemical attacks, the mobile fell in behind Ripper's logistics operation center and moved within 6,500 meters of the second obstacle belt. Still behind MCSSD-11, Colonel Powell ordered Captain Jeffrey J. Morsch, DSG-1's operations officer, to set up the retransmission site and establish communications between the northern and southern CSSDs. Powell, having one of the few Position Locating and Reporting System (PLRS) sets in the DSG, left Morsch

in charge and led an ambulance to MCSSD-17's location to medevac two wounded Marines from Task Force Grizzly.<sup>514\*</sup>

Fifteen kilometers northwest of MCSSD-11, Captain Winter deployed MCSSD-17 in the inverted triangle formation with his two mini-mobiles oriented north towards the enemy and the command element located to the south. Winter quickly ordered the D-7 bulldozer to scoop out a prisoner-of-war compound in the middle of the position and manned it with the only three Marines he had available. Iraqi soldiers drifting into the area throughout the remainder of the day and night were met by the Marines, disarmed, and guided to the prisoner of war compound.<sup>\*\*</sup> While MCSSD-17 wrestled with the Iraqi prisoners, Task Force Ripper isolated Al Jaber Air Base and waited for Task Force Grizzly to attack the objective. During the remainder of the day, MCSSD-17 pushed 10,000 gallons of water and 10,300 gallons of fuel to Task Force Ripper; the 3d Battalion, 11th Marines; and the 3d Battalion, 12th Marines, which supported Task Force Grizzly.<sup>515\*\*\*</sup> In the late afternoon, Lieutenant Colonel Kelly, CSSD-10's commanding officer, arrived at MCSSD-17 and decided to establish a combat service support area at the same location. Kelly contacted Major Howard E. Rice, Jr., CSSD-10's executive officer, and told him to prepare elements of the CSSD to move into Kuwait on the 25th.<sup>516</sup> Following Kelly's visit, Colonel Powell arrived at MCSSD-17 with DSG-1's ambulances and dispatched two wounded Marines and four injured Iraqis to OP-4. Powell then remained overnight with the mobile.<sup>517</sup>

After setting up in the triangle defensive formation south of the second obstacle belt, Captain Burke's MCSSD-11 dispensed combat service support over the entire breadth of the division's zone of operation. Responding to a request from DSG-1 to supply Task Force Grizzly, which was on the other side of the division's area of operations, Burke ordered 1st Lieutenant Delaney C. Williams, commander of the Alpha Train, to supply first Papa Bear's logistics operations center and then resupply Grizzly. Missing the operations center in the fog, the Alpha Train continued west, crossed two regimental boundaries, and was sporadically and ineffectively shot at by the Iraqis. Williams supplied Grizzly with 3,200 gallons of fuel and 2 pallets of MREs. While the Alpha Train traversed the division's zone, Burke sent the Bravo Train, led by First Lieutenant Juan C. Osorno, to distribute 2,700 gallons of fuel and 1,600 gallons of water to the combat engineers and the 3d Battalion, 9th Marines.<sup>518</sup>

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\*PLRS was an automated navigation aid which operated with Marine Corps radios. A master station using the UHF frequency band, coordinated all signals in a particular area. Besides giving positioning information, PLRS was used as an alternate means of communications.

\*\*According to Capt Winter, "Iraqis drifted out of the fog into MCSSD-17's position throughout the night. Fire discipline was a concern for the Marines on the perimeter who wanted to protect the mobile from the hostiles without shooting the friendlies." (Winter comments)

\*\*\*MCSSD-17's aggressive support to Task Force Ripper was not always appreciated. 1stLt Edwin E. Middlebrook moved a refueler into one of the jump-off positions for the attack on Al Jaber Air Base, where he was told to leave because of the explosiveness of the fuel. (Winter comments)

Back in Saudi Arabia at OP-4, the 24th was a day of anticipation, preparation, and processing of prisoners of war. Waiting for its trucks to return from the 11th Marines, CSSD-10 loaded its few available vehicles to resupply MCSSDs -11 and -17 the following day. Each resupply convoy would carry 20,000 gallons of fuel, 5,400 gallons of water, ammunition, and one-day's supply of MREs. After receiving Lieutenant Colonel Kelly's order to move forward, Major Rice began organizing a detachment to send to MCSSD-17's location. During the day, Company B, 1st Battalion, 25th Marines dropped off 111 enemy prisoners of war taken during Task Force Grizzly's infiltration of the first obstacle belt.<sup>519</sup> CSSD-10's military police detachment processed and transferred these prisoners and 12 others to the DSC holding pen at Khanjar.<sup>520</sup>

During the morning, Captain Ritchie's CSSD-13 successfully helilifted resupply packages to Task Forces Taro, Grizzly, and Shepherd and enjoyed some good fortune. At OP-4, MWSS-271's mobile FARP, which set up next to CSSD-13 to support MAG-16, gave Ritchie close access to helicopter operations.<sup>521</sup> Another piece of luck was that CSSD-13 had good communications with the division and could both monitor the tactical situation and talk to the supported units. The CSSD commander attributed this success to the leadership and technical ability of Corporal Andrew S. Jericho, a wireman who tapped into the division's radio nets.\* At noon, Task Force Taro requested an emergency resupply of water. By 1500, CSSD-13 successfully helilifted two pallets of bottled water to Taro on the division's eastern flank.<sup>522</sup> At the end of the day, Ritchie reviewed the day's resupply operations and tactical situation, while his operations officer, Captain Brown, scheduled the next day's resupply missions with the 3d MAW.

### *G+1: 25 February 1991*

*On G+1, I MEF advanced against the fiercest resistance it encountered during the ground offensive.<sup>523</sup>*

On 25 February, the 1st Marine Division prepared to seize Al Jaber Air Base and then deploy north towards Kuwait International Airport. To support the division's extended operations, CSSD-10 planned to move to MCSSD-17's position near Al Jaber. To the northwest, the 2d Marine Division aimed at bringing the 8th Marines through the obstacle belts and then attacking north towards Al Jahra with all three maneuver units. In support, DSG-2 intended to establish a transfer point to distribute supplies to both mobiles and to provide a maintenance capability near MCSSD-26's position. On the front lines in Kuwait, the mobile CSSDs prepared for the second day of combat.

### *The 2d Marine Division Zone of Action*

During the morning, MCSSD-26 resupplied the 6th Marines and replen-

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\*In addition to supporting CSSD-13, Cpl Jericho and his 11 communicators relayed messages for both divisions and the DSGs. (Ritchie comments)





Photo courtesy of LtCol William H. Ritchie, III

*At the far left of this picture is Cpl Andrew S. Jericho of the CSSD-13 Communication Section, who used creativity and persistence to maintain communications during the advance. Capt William Ritchie III, the commander of CSSD-13, is at the far right.*

ished its own stock of supplies. The mobile delivered 11,000 gallons of water, 4 pallets of MREs, TOW missiles, 40mm grenades, .50-caliber ammunition, and its remaining 16,500 gallons of fuel. Every unit received fuel, but not as much as it wanted.<sup>524</sup> Accordingly, Lieutenant Colonel Wittle requested resupply of water, fuel, and ammunition from DSG-2. At 0900, CH-53 Sea Stallion helicopters, which mistook MCSSD-26 for the Tiger Brigade, dropped water, fuel, and MREs.<sup>525</sup> Two hours later, Lieutenant Colonel Hering, DSG-2's executive officer, arrived with his convoy at RRP Fournier, established the northern transfer point, and gave all his water and fuel to MCSSD-26. Later, helicopters carrying 60 TOW missiles, 3,000 rounds of .50-caliber machine gun ammunition, and about 1,000 rounds of 40mm ammunition arrived from Khanjar. Wittle rapidly distributed the munitions to the 6th Marines.<sup>526</sup>

After the morning's resupply operations, Lieutenant Colonel Wittle moved MCSSD-26 north to Phase Line Red in preparation for the 6th Marines' assault to Phase Line Horse.\* Wittle planned to move Serial 1 north of the

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\*Phase lines are used to control the movement of units on a battlefield. The 2d Marine Division designated numerous phase lines, including Phase Lines Red and Horse, for common reference.

Abdullea Road and then bring forward the second serial. Wittle left First Lieutenant Walter T. Anderson and his landing support detachment with Serial 2 to receive supplies by helicopter.\* At 1430, with the enemy still in the area, Serial 1 slowly moved north, hampered by poor visibility from the overcast sky and the burning oil fires. Because of the loss of PLRS and GPS navigational data in the division's zone of action, Wittle reverted to map and compass, skills learned years before at The Basic School, to guide his convoy to a position 500 meters north of the East-West Abdullea road where they stopped for the night.\*\* The visibility was so bad that the Marines walking in front of the convoy periodically stopped and scraped a swath of sand away from the ground until they found the asphalt of the road. Concerned that Serial 2 might get lost in the dark, Wittle ordered Major Clarke to remain at Phase Line Red until the next morning.<sup>527</sup>

Back in Saudi Arabia, MCSSD-28 started the morning by sending a request to DSG-2 for two AAVs from the prepositioned war reserve and then advanced with the 8th Marines logistics train northeast into Kuwait. The mobile and the logistics train moved together in a giant convoy behind the 2d Battalion, 4th Marines. When the line of trucks approached the entrance to Blue 4 at 0730, it was stopped by the military police who considered turning the convoy around in favor of approaching combat units, but then allowed the convoy to proceed after gaining an appreciation for its huge size and importance. After exiting the first belt of mines at 0900, Lieutenant Colonel Head, the mobile commander, established a refuelling site for Company C, 4th Tank Battalion, which was rushing forward to join 8th Marines as the regimental reserve. Ordered to relocate without refuelling the tanks, MCSSD-28 packed its equipment and drove 28 kilometers to establish a hasty combat service support area on the far side of the second minefield.

After crossing both obstacle belts and reaching Phase Line Red, the 8th Marines attacked north on the right flank of the 6th Marines to Phase Line Horse.<sup>528</sup> MCSSD-28 remained in position north of the second belt of mines, resupplied the 8th Marines, and awaited replenishment from DSG-2. The first customer served by MCSSD-28 was Company C, 4th Tank Battalion, whose tanks finally emerged from Blue 4 enroute to the line of departure. At 1100, MCSSD-28 sent 15 TOW missiles to the 1st Battalion, 8th Marines, which had returned to the 8th Marines operational control after breaching the minefields with the 6th Marines. Two hours later, MCSSD-28 called DSG-2 for an emergency resupply of TOW missiles and tank rounds and prepared a landing zone to receive the munitions. After waiting two hours while Iraqi artillery exploded within 200 meters of the mobile's command post, resupply helicopters arrived, unloaded unrequested water and unneeded line charges, but no ammunition. At 1600, MCSSD-28 sent refuelers to the logistics trains of the 1st Battalion, 8th Marines,

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\*On the 25th, MCSSD-26's Red Patch Marines recovered supplies from 13 helicopter support missions.(MCSSD-26 Sitrep 24Feb-1Mar91)

\*\*The Basic School at Quantico, Virginia, provides newly commissioned Marine second lieutenants their first schooling as officers in the fundamental tactical skills of their profession.



and the 2d Battalion, 4th Marines, while the regimental logistics train transferred wounded Iraqis to the mobile in preparation for the attack.\* Lieutenant Colonel Head sent trucks carrying most of his remaining supplies of fuel, water, and ammunition with the logistics train and remained behind to retrieve refuelers, await resupply from DSG-2, and to medevac the wounded Iraqis.

Earlier that morning, Lieutenant Colonel Hering had established DSG-2's northern transfer point at RRP Fournier and was surprised by MCSSD-26's need of supplies so soon. After resupplying the mobile, the northern transfer point needed to replenish its stocks of water and fuel, but did not have communication with DSG-2 at the Ponderosa, which was 45 kilometers away and out of range of the VHF radios. Earlier in the day, Colonel Donnelly had ordered Lieutenant Colmenares to move the collecting and clearing and radio relay stations to the northern transfer point which broke the communications link with the rear. After Colmenares moved, Hering was unable to call for replenishment, pass emergency requests for ammunition received from both mobiles, and forward a request from MCSSD-28 to medevac Iraqi wounded. At Khanjar, the DSC heard the requests from the mobiles for resupply. Making separate trips to the Ponderosa, Colonel Woodhead, the DSC's chief of staff, and Lieutenant Colonel O'Donovan, the DSC's assistant operations officer, carried the mobiles requests to DSG-2, ordered that bulk fuel and water trucks be reconfigured, and sent into Kuwait.\*\* Receiving no resupply on the 25th, Hering spent the afternoon watching helicopters deliver ammunition from the DSC and medevacing wounded while regretting that he had brought forward such a large maintenance detachment and had not used the trucks to carry water, fuel, and tank-killing ammunition.<sup>529</sup>

At 1900, Lieutenant Colonel Head began to prepare MCSSD-28 to follow the 8th Marines and again requested replenishment from DSG-2. The Iraqis underscored the need to move by shooting artillery into the area and damaging one of the mobile's LVSSs. The bad visibility from the oil fires and weather, the coming of night, the loss of GPS and PLRS navigation data, and the need to reload ammunition staged on the ground, nevertheless, delayed the displacement. Head maintained communications with the regimental logistics train and the northern transfer point, but not with the Ponderosa. At 2000, MCSSD-28 again requested replenishment from the transfer point which was located five kilometers northwest of MCSSD-28. Hering informed Head that he could neither push supplies to the mobile nor pass his request to DSG-2 since he did not have communications with the rear. At 2200, Lieutenant Colonel Head lined up his nearly empty mobile and waited all night for the 8th Marines to order him forward.<sup>530</sup>

Lieutenant Colonel Skipper, the commanding officer of the 8th Engineer

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\*On the 25th, the Marines from the 2d Battalion, 4th Marines, were replaced with Marines from the 3d Battalion, 23d Marines, keeping the number of infantry Marines carried by MCSSD-28 during the ground war at 100.

\*\*There is no record of these trucks reaching either the mobiles or the transfer point on the 25th. Six years after the fact, LtCol Matter, DSG-2's motor transport officer, remembered the "hot tasker" from Col Woodhead and reacting to the mission, but could not sort out the specifics from other events. (LtCol Carl D. Matter E-Mail, 7Apr97)

Support Battalion, started the 25th still waiting impatiently at the Saudi berm for permission to push his battalion into Kuwait. He finally ordered Captain Hull's Company C to the first obstacle belt; Captain Hearnberger's Company B, which had returned to his control, to the second belt; and Captain Hatton's Company A to extend the Khanjar Expressway to the first minefield.\* Skipper focused the battalion's efforts on improving all breach lanes through both obstacle belts.\*\* The Ninja Bulldozers pushed sand and mines to the side of the road and engineers removed visible explosives, checked the lanes with metal detectors, and marked the routes. The Ninja Bulldozers performed flawlessly even when they hit mines.\*\*\* The explosions from the antitank mines only dented bulldozer blades while the blasts from all but one antitank mine just peeled back portions of the blade an inch or two. One antitank mine damaged the tread of a Ninja Bulldozer which was evacuated to Khanjar, fixed, and returned to action the next day. On the other hand, a mine destroyed a British flail bulldozer used by the engineers, and blocked a breach lane for a day. Fortunately, exploding mines caused no serious injuries to the Marines, however, a blast from one knocked Company B's indomitable Staff Sergeant Daniel A. Kur off the bulldozer he was riding.\*\*\*\* Kur picked himself off the ground, checked the condition of the driver, and continued to clear mines.<sup>531\*\*\*\*\*</sup> For the remainder of the day, the battalion graded the breaches, replaced broken engineer stakes, and recovered vehicles either damaged during the assault or by straying outside the marked lanes.<sup>532\*\*\*\*\*</sup>

### *The 1st Marine Division Zone of Action*

The 25th started early for Captain Winter's MCSSD-17 Marines and for DSG-1. After resupplying Ripper on the 24th, the mobile was low on fuel and

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\*Col Skipper commented that, "A great sight I will always treasure occurred at approximately 0900, as my vehicle approached the first minefield belt. We passed a military police check point which displayed a hastily scrawled sign that said 'Semper Fi.' One of the military policeman held up a Playboy magazine foldout. His smile, the sign, and the foldout told me that 'the Marines had landed, and the situation was well in hand.'" (Skipper comments)

\*\*LtCol Skipper and LtCol John D. Winchester, the commanding officer of the 2d Combat Engineer Battalion, planned the return of Company B to the control of the 8th Engineer Support Battalion "with a handshake." Skipper and Winchester had known each other since their college days at the Citadel. (Skipper comments)

\*\*\*The 8th Engineer Support Battalion Ninja Bulldozers hit nine anti-personnel mines and five anti-tank mines during breach clearing operations. (Skipper comments)

\*\*\*\*Col Skipper acknowledged the bravery of the Ninja Bulldozer drivers by saying, "They were driving an experimental item, that was not combat tested. It had gone from a concept to fielding in 60 days. Their courage was inspiring." (Skipper comments)

\*\*\*\*\*For his acts of gallantry on the 24th and 25th, SSgt Kur was presented the Silver Star Medal.

\*\*\*\*\*By the end of G+2, the 8th Engineer Support Battalion cleared 50 kilometers of road behind the 2d Marine Division. (DSC, ComdC 16Feb-13Mar91, Sec 3.)

water and needed to replenish its stocks. At 0100, Winter, knowing that Ripper was going to continue the attack at daylight and that CSSD-10 could not resupply until later in the day, sent his executive officer, First Lieutenant Shawn B. Gormish, with empty bulk-liquid trucks to OP-4 to pick-up supplies.<sup>533</sup> A couple of hours later, Colonel Powell departed the area enroute to Khanjar to touch base with General Krulak while guides from the 1st Battalion, 7th Marines, arrived to lead a resupply mission to their position. MCSSD-17 gave the battalion 4,300 gallons of fuel, 4,000 gallons of water, batteries, and 15 TOW II missiles.<sup>534</sup> At 1300, CSSD-10's scheduled resupply convoy reached MCSSD-17 and transferred 20,000 gallons of fuel, 5,400 gallons of water, and ammunition. An hour later, Lieutenant Gormish returned from OP-4 with 14,400 gallons of fuel. Delayed during the morning by an Iraqi counterattack on Task Force Papa Bear, the main body of Task Force Ripper started north in the afternoon. MCSSD-17, now well provisioned, stayed in position, pushed supplies to Task Force Ripper, and guarded 1,600 prisoners-of-war who crowded its holding area.<sup>535</sup>

Earlier that day, in fact at dawn, MCSSD-11's Alpha Train returned to the mobile's position south of the second line of obstacles after resupplying Task Force Grizzly, starting a morning of hectic combat service support operations. Upon its arrival, Captain Burke sent the Alpha Train at 0745 to supply Papa Bear's command element. Fifteen minutes after completing the mission, an Iraqi tank and two armored personnel carriers carrying a regimental commander emerged from the fog in front of Papa Bear's command post and surrendered. The Iraqi commander warned the Marines that the combat units following him intended to fight. Almost immediately, a 10-minute battle erupted around the regimental headquarters followed by a three-hour assault on the 1st Tank Battalion.<sup>536</sup> After listening to the battle begin over the regimental tactical net, Burke led a small convoy forward with fuel and ammunition to resupply the tankers and ordered the mobile's main body to follow him in an hour. Burke moved his convoy to within 200 meters of the second obstacle belt delivering 5,000 gallons of fuel, 1,536 rounds of M60 tank ammunition, and 15 TOW missiles to the tank battalion's combat train, while the battle raged only 2,000 meters to the north and artillery and mortar rounds burst around his position. A four-round Iraqi salvo impacted 150 meters from his convoy that the 11th Marines immediately answered with an artillery barrage, silencing the enemy fires.<sup>537\*</sup>

Back at CSSD-13, Captain Ritchie listened to Papa Bear's engagement on the division's tactical net and decided to send TOW missiles to MCSSD-11. Thirty minutes later the CSSD-10 commander, Lieutenant Colonel Kelly, heard MCSSD-11 unsuccessfully try to request TOWs over the DSG-1 command net and in turn tried and failed to pass the request to OP-4. Disappointed and concerned by the lack of communications, Kelly noticed in the distance an antennae poking into the sky, drove to the location, and discovered an amphibious assault communications vehicle. Kelly asked to use the radio, called CSSD-10, and

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\*Burke commented that his resupply convoy was close enough to the battle to see turrets flying off exploding Iraqi tanks and that the effect of the Marine artillery on the enemy was an "exhilarating" experience. (Burke comments)



Photo courtesy of Maj Adrian W. Burke

*MCSSD-11 passes by Iraqi armor destroyed by Task Force Papa Bear.*

ordered an emergency resupply of TOW missiles for MCSSD-11. Back at OP-4, the CSSD-10 ammunition technicians, responding to both CSSD-13's request and Kelly's order, pulled TOW missiles for CSSD-13. Lieutenant Smith, CSSD-13's landing zone officer, prepared the TOW missiles for helicopter transportation and briefed the pilots on the location of their resupply mission, while Captain Brown in the operations center called over the radio the brevity code "Mackerel" (TOW Missiles), for MCSSD-11. Captain Ritchie calculated that it took only an hour and 15 minutes from when he decided to send TOWs until they reached MCSSD-11, while Lieutenant Colonel Kelly estimated that it took 30 minutes from his call until he saw two CH-53 Sea Stallion Helicopters carrying TOWs, fly over his position towards MCSSD-11.<sup>538</sup>

Just south of the second obstacle belt, Captain Burke waited with his empty convoy for the arrival of the main body of MCSSD-11 while receiving requests from the 1st Tank Battalion for Dragon missiles and from the 1st Battalion, 1st Marines, for resupply. The main body with its newly arrived batch of TOW missiles joined Captain Burke at noon and then established a defensive position 1,000 meters south of the second obstacle belt. From this position, the mobile resupplied the 1st Tank Battalion with 39 Dragon and TOW missiles and 2,000 gallons of water; the 1st Battalion, 1st Marines, with 42 TOW and Dragon missiles together with small arms ammunition; and the engineers with 3,900 gallons of fuel. Meanwhile, Colonel Powell, after missing General Krulak at Khanjar, returned to the battlefield and ordered Captain Morsch and Ensign Handcock to move the retransmission site and the medical mobile back to the first obstacle belt and to reestablish communications which were lost during the night. Morsch executed Powell's order and reestablished communication within DSG-1 and with Task Forces Grizzly and Taro.

After dispatching the resupply trains to Papa Bear, Captain Burke sent a request to DSG-1 for fuel, water, ammunition, and a medevac for 12 wounded Marines and Iraqis at Papa Bear's regimental aid station. Thirty minutes later and

just beating the fog that drifted into the area, two CH-46 Sea Knight helicopters evacuated the casualties. The ammunition resupply was canceled, however, until the weather improved. Burke ordered MCSSD-11 to dig in for the night, and at 2000, dispatched Lieutenant Williams with the Alpha Train to resupply the 3d Battalion, 9th Marines. Missing the battalion's logistics train in the fog, Williams found its combat train near the battalion's forward positions just as a firefight broke out. The infantrymen ordered the Alpha Train out of the area, but recalled it after the battle was over. During the second attempt to resupply the battalion, the Iraqis struck again. The infantrymen circled the Alpha Train with amphibious assault vehicles and tanks and repelled the Iraqis. Lieutenant Colonel Michael H. Smith, the battalion commander, concerned with the safety of the Alpha Train Marines, ordered them down from their exposed and elevated ring-mounted machine guns on their trucks. Mortar rounds fell around the position and small arms zinged through the area. The Alpha Train remained encircled in its armored cocoon until the next day.<sup>539</sup>

CSSD-10 also had an active time on the 25th. Lieutenant Colonel Kelly's troops at OP-4 retrieved trucks from the 11th Marines, loaded and launched resupply convoys to MCSSDs -11 and -17, and prepared to move into Kuwait. During the previous night, most of the artillery ammunition trucks had returned from the 11th Marines except for those with the 3d Battalion, 11th Marines. Major Lucenta, CSSD-10's operations officer, then visited the battalion headquarters to

*A CH-53 heavy lift helicopter with an external load, departs CSSD-13 for a resupply mission inside Kuwait.*

Photo courtesy of LtCol William H. Ritchie III





Photo courtesy of LtGen James A. Brabham, Jr.

*A column of CSSD-10 vehicles moves into Kuwait during the ground phase of the campaign. The vehicles are in single file to follow the tracks of the lead vehicle with the intent of avoiding mines or soft spots.*

reclaim his vehicles. Between 0900 and 1600 at OP-4, Major Rice, CSSD-10's executive officer, sent forward three convoys which carried maintenance contact and salvage teams, a collecting and clearing company, graves registration personnel, engineers, ammunition technicians, the landing support detachment, 32 pallets of MREs, 47,000 gallons of water, and 40,800 gallons of fuel. Moving towards MCSSD-17's position, Colonel Powell met the convoys and led them to a point near the mobile's position for the night. At OP-4, CSSD-10 received 68,000 gallons of water and 131,000 gallons of fuel during the day.<sup>540</sup>

With CSSD-10 on the move, Captain Ritchie used CSSD-13's few trucks to move supplies from CSSD-10's dumps to his landing zone. Even with this added burden, the CSSD successfully completed its daily helicopter resupply of Task Forces Taro, Shepherd, and Grizzly as well as the emergency TOW resupply to MCSSD-11. In the evening, Captain Ritchie reviewed the situation and scheduled helicopters for the next day. At the top of the list were the 100 TOW missiles ordered during the evening by MCSSD-17.<sup>541</sup>

While tank battles raged and DSG-1 resupplied itself and the division, the engineers moved forward with the 1st Marine Division. Major Musca, the commanding officer of the combat engineer detachment supporting Task Force Pappa Bear, ordered Captain Salinas' Company A, 7th Engineer Support Battalion, to build and operate an enemy prisoner of war camp. Salinas directed his bulldozers to erect a berm around an area about the size of a football field to hold 1,250 prisoners. During the afternoon, the DSC engineers quit their jobs as jailers when Musca ordered them to move forward behind the 1st Tank Battalion to an assembly area near the Al Burqan Oil field.<sup>542</sup> Behind Task Forces Papa Bear and Ripper, the 7th Engineer Support Battalion completed marking and proofing lanes through both obstacle belts.<sup>543</sup>



*G+2: 26 February 1991*

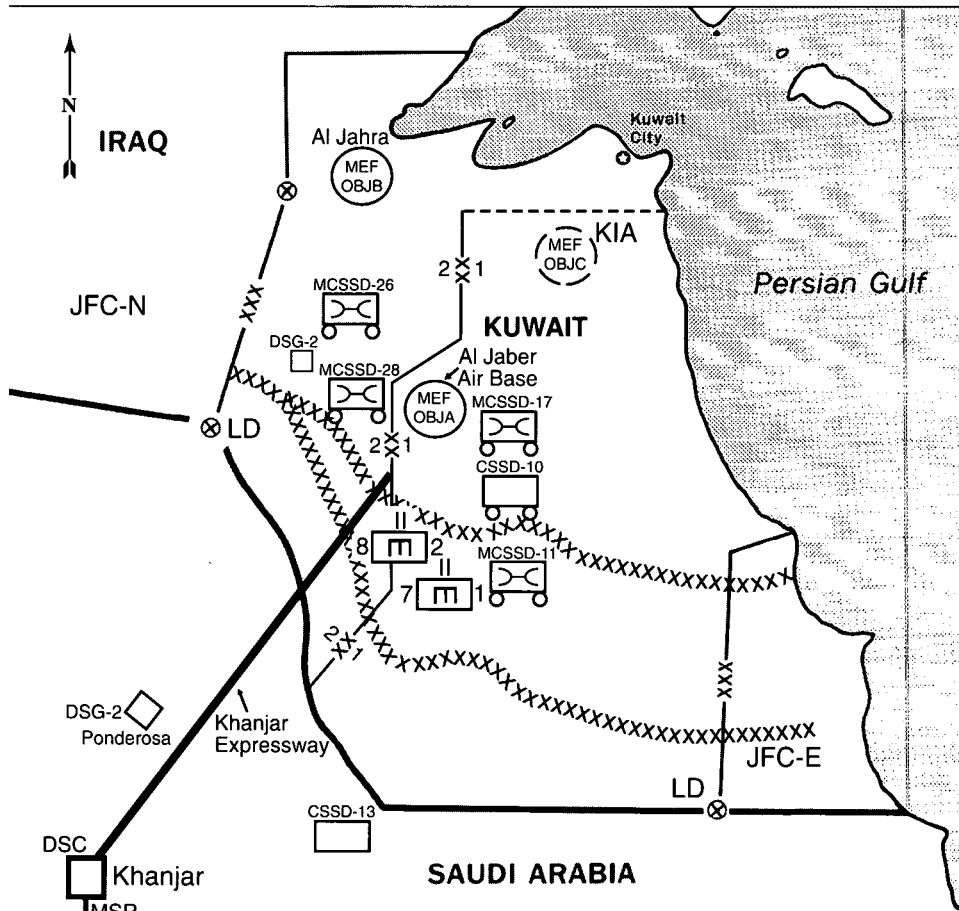
*After refueling and replenishing during the night and early morning hours, I MEF continued to attack north on 26 February. Its objectives were Kuwait International Airport and the Al-Mut'la Pass (Al-Jahrah).<sup>544</sup>*

The second day of the ground war ended with both divisions advancing north after repelling morning counterattacks by the Iraqis. On the morning of the 26th, I MEF's assault regiments and task forces focused on their final objectives and prepared to attack. To support both divisions' northerly movement, the DSC planned to establish a transfer point at Al Jaber Airbase, which the 1st Marine Division isolated on the 24th and 25th in preparation for the foot-mobile Task Force Grizzly to clear on the 26th. Both DSG-2 and CSSD-10 aimed to project elements north of Al Jaber to support the attacks on Al Jahrah and Kuwait International Airport, respectively. The first two days of the war had produced few casualties, but had generated hordes of surrendering Iraqis creating control and evacuation problems for both the 1st FSSG and the DSC. On the western flank, General Keys prepared to seize Al Jahrah, advancing with the Tiger Brigade on the left, the 8th Marines on the right, and the 6th Marines in the middle.

*The 2d Marine Division Zone of Action*

After dawn on the 26th, Major Clarke, MCSSD-26's executive officer, led Serial 2 north of the Abdullea road where it joined Serial 1 and together prepared to support the 6th Marines' final attack of the war. Believing there was time before the attack, Lieutenant Colonel Wittle sent refuelers and water trucks to both the 1st Battalion, 6th Marines, and the 8th Tank Battalion, ordered that the ammunition received on the previous day be split into battalion packages, and directed that the neighboring Iraqi bunkers be cleared. The security sweep produced three enemy prisoners, weapons, and ammunition while discovering the carcass of a crashed Marine Corps Harrier jet. MCSSD-26 reported these discoveries to DSG-2. Concurrently, the mobile's doctor, Navy Lieutenant Kenneth R. Collington, began operating on a wounded Marine in the back of an ambulance. In the midst of these activities, the regimental operations officer, Major Jack K. Sparks, Jr., ordered MCSSD-26 to move immediately to support the attack.

Instantly, Lieutenant Colonel Wittle had a number of things to do before moving. Almost simultaneously, he ordered the ammunition reloaded on trucks, requested that the regimental S-4, Captain Lorine E. Bergeron III, designate which units would get the munitions, urged Collington to hurry the surgery, and tried to recall the two resupply convoys. Bergeron replied that the ammunition should go to the 2d Battalion, 2d Marines, and Wittle then sent his munitions trucks to the battalion's logistics train. Failing to contact the resupply missions and unhappy with the idea of abandoning his Marines, Lieutenant Colonel Wittle sent Second Lieutenant Kelley, the motor transport officer, to find the refuelers.



*DSC Positions at the Beginning of G+2: 26 February 1991*

After several more attempts to contact them by radio and on completion of the medical procedure, Wittle reluctantly ordered MCSSD-26 forward and left Captain Warker, the operations officer, behind to wait for Kelley and the orphaned resupply convoys. Just as the mobile was about to disappear from sight, Lieutenant Kelley appeared from behind a cloud of dust with the lost convoys and rejoined the main body of the MCSSD.<sup>545</sup>

On the 26th, the situation improved somewhat for Lieutenant Colonel Hering at DSG-2's northern transfer point. During the early morning hours, Lieutenant Colmenares, with his collecting and clearing station, had arrived at the transfer point and Hering immediately sent him to the Ponderosa with all of the empty bulk-liquid trucks. Colmenares returned later in the morning with fuel and water. Hering informed MCSSD-28 that supplies were available, but that they would have to be picked up at the transfer point.<sup>546</sup> He then sent the bulk-liquid trucks back to the Ponderosa for more provisions and ordered that the convoy's communication vehicle be left at the breach to reestablish contact with the Ponderosa. After restoring communications with the rear, Hering was astonished to learn that the DSG-2 was preparing to relocate into Kuwait. He believed this



was a mistake because scarce trucks would be used to move the unit rather than supplies.<sup>547</sup>

On the division's right flank, the 8th Marines logistics train completed an all night road march to Phase Line Horse and sent MCSSD-28's truck detachment to supply fuel, water, and ammunition to the 1st Battalion, 8th Marines.\* After waiting all night to move, MCSSD-28 drove 11 kilometers north, joined the logistics train at 0900, exhausted its remaining supplies, and spent the day replenishing itself. On arrival at Phase Line Horse, Lieutenant Colonel Head, the mobile commander, immediately dispatched the last of his meager stocks of water and fuel to the regiment's three infantry battalions, headquarters, and the prisoner of war compound, while again requesting resupply from the northern transfer point. At 1030, helicopters carrying ammunition from the DSC delivered munitions requested the day before. Needing more provisions, Head pressed the northern transfer point for replenishment and reiterated his G-day request for two AAVs and sent a new request for an M1A1 Tank. In response, Hering, the transfer point commander, having just received fuel and water as a result of Lieutenant Colmenares' nocturnal replenishment mission, informed Head that he could now pull supplies. At noon, MCSSD-28 sent all available liquid containers to the northern transfer point, which was now located 10 kilometers south of the mobile.<sup>548</sup>

To support the afternoon attack while replenishing at Phase Line Horse, Lieutenant Colonel Head attached his landing support detachment to the regimental logistics train which departed at 1300. As trucks returned from the morning resupply runs to the regiment, Head sent them to the northern transfer point for supplies and treated wounded Iraqis.<sup>549</sup> At 1630, the MCSSD commander ordered the mobile to prepare to displace north to join the 8th Marines which had run out of fuel after its afternoon attack. Using a GPS borrowed from the 8th Marines, PLRS, maps and compasses, MCSSD-28 crept north in the darkness, sidestepped obstacles and built-up areas, and completed a 23-kilometer road march in the early hours of the fourth day of the war.<sup>550</sup>

Back at the Ponderosa, requests for support were coming in from the Tiger Brigade. On G-day, the 170 trucks of the brigade's forward logistics support element followed the assault battalions through the breach and set up a support area on the far side of the minefield.<sup>551</sup> On the Saudi side of the border, the 502d Support Battalion remained in place and passed a request to DSG-2 to push 100,000 gallons of fuel and 60 LVS loads of ammunition forward to the brigade.<sup>552</sup> DSG-2 forwarded the request to the DSC which dispatched its 970 refuelers and 35 LVSs to supply the needed fuel and ammunition.\*\* Also on the 26th, the 8th Motor Transportation Battalion sent 30 LVSs to DSG-2 to move the organization into Kuwait.<sup>553</sup>

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\*The 8th Marines logistics train took eight hours to travel seven kilometers on the night of 25-26 February 91, because of "a route littered with mines, unexploded ordnance, and Iraqi firing holes." (8thMar ComdC Feb91, Sec II)

\*\*During the four days of the ground war the Tiger Brigade burned a total of 80,000 gallons of fuel, shot 708 artillery rounds, and launched 276 MLRS rockets. (Tiger ComdC)

At the minefields, in the meantime, the 8th Engineer Support Battalion continued to clear mines in the obstacle belts, then moved forward to prepare Al Jaber Air Base for the establishment of the DSC's transfer point. In the minefields, the engineers continued to discover state-of-the-art plastic mines in lanes that had been previously cleared and extensively travelled on by hundreds of vehicles. Leaving Company B and Company C there, Lieutenant Colonel Skipper, the commanding officer of the 8th Engineer Support Battalion, ordered Captain Hatton's Company A and his Bravo command group to Al Jaber to establish the DSC's transfer point. Arriving at the air base, the engineers found the area littered with unexploded ordnance and wrecked and abandoned Iraqi vehicles. Skipper ordered Captain Stephen H. Negahnquet's explosive ordnance platoon to the air field. Negahnquet's teams immediately began clearing the area immediately to the west of Al Jaber so that the DSC could safely establish a new combat service support area.<sup>554</sup>

### *The 1st Marine Division Zone of Action*

During this time in the 1st Marine Division area, at midnight on the 25th, the DSG-1 headquarters sent a message to the medical mobile to meet an ambulance carrying two wounded Marines from Task Force Grizzly, four kilometers south of the first obstacle belt between lanes 4 and 5. The medical mobile moved to the rendezvous point and waited for the wounded Marines. After standing by for 45 minutes for the ambulance to arrive, Ensign William C. Hancock, the offi-

*A runway at Al Jaber Airbase is marred by two parallel lines of craters which prevented the immediate use of the airfield. Unexploded ordnance in the area delayed the DSC from establishing CSSA-3 until 27 February.*

Photo courtesy of LtGen James A. Brabham, Jr.





Photo courtesy of LtGen James A. Brabham, Jr.

*Demonstrating its versatility, MCSSD-17 refuels Supercobra helicopters near Al-Jaber Air Base in Kuwait on 27 February—G plus 2.*

cer-in-charge of the medical mobile, unsuccessfully searched the surrounding desert for the lost medevac.<sup>555</sup> Before dawn on the 26th, MCSSD-11, located 20 kilometers north of the rendezvous point, answered a call on the radio for “any station on the net” from the missing ambulance. The corpsmen were frantically looking for the medical mobile and were gravely concerned that the two wounded Marines were about to die after riding for more than six hours in the ambulance. Captain Burke, the MCSSD-11 commander, calmed the corpsmen, ordered them to stop their vehicle, and to verify their position. Burke then changed radio frequency, called for a helicopter medevac, switched his radio back to the corpsmen, and instructed them on the proper method for identifying themselves to and safely receiving the helicopter. Fifteen minutes after MCSSD-11 heard the distress call, a helicopter picked up the wounded Marines. After the medevac, Colonel Powell ordered the retransmission team and the medical mobile to DSG-1’s headquarters, which had moved near Al Jaber Air Base the previous day. After arriving at Jaber, Powell sent a smaller retransmission team to establish communications between DSG-1, CSSD-13, and the DSC at Khanjar.<sup>556</sup>

On the 26th, Task Force Ripper engaged large numbers of dug-in Iraqi infantry and armor, received artillery fire, and captured numerous Iraqis as the Marines neared Kuwait International Airport. Captain Winter intended to move MCSSD-17 forward and to resupply the task force. Before advancing, CSSD-10’s forward element rolled into MCSSD-17’s position and topped off the mobile. At about the same time, the 100 TOW II missiles, requested the night before, arrived by helicopter from CSSD-13. While Winter’s mobile digested its resupply, a Marine Corps UH-1 Huey helicopter circled and landed, with the pilot asking for the mobile to refuel his aircraft and his entire squadron of Super Cobras. Nonplussed, and enjoying the additional security provided by the attack helicopters, Captain Winter, who had served a tour with the wing, proceeded to pump

8,300 gallons of fuel into the 10 aircraft. At 1300, MCSSD-17 moved north 35 kilometers and found Ripper four hours later in an orchard west of Kuwait International Airport. MCSSD-17 immediately pushed water, fuel, MREs, and TOW missiles to the task force. After completing his immediate mission, Winter ordered all remaining water and fuel transferred to storage bags on the ground, called for resupply from CSSD-10, and sent his empty vehicles south to pull fuel and water.<sup>557</sup>

After midnight at MCSSD-11 on the 26th, Captain Burke sent First Sergeant Joseph M. Collins and Gunnery Sergeant Mark W. Fishback to find the emergency resupply convoy requested the day before from CSSD-10. At dawn Captain Burke dispatched the Bravo Train to distribute the last of MCSSD-11's fuel and water to the 1st Battalion, 1st Marines, and to the combat engineers. After the return of the Alpha Train from its second all-night combat resupply mission, Captain Burke prepared MCSSD-11 to move, but awaited for replenishment of his supplies. At 0800 on the 26th, First Sergeant Collins arrived with the CSSD-10 convoy that had departed OP-4 the day before, instead of the emergency resupply convoy. Over the next two hours, CSSD-10 transferred 20,000 gallons of fuel, 5,400 gallons of water, and ammunition to MCSSD-11's trucks. Just as the mobile was about to displace, CSSD-10's other emergency convoy arrived. Captain Burke left the empty trucks of the Bravo Train to trade with CSSD-10's full trucks, and told its commander, Lieutenant Osorno, to follow him by tracking his PLRS signal. MCSSD-11 then passed through the second obstacle belt and was rejoined by the Bravo Train.

At 1300, Captain Burke led MCSSD-11 which carried 41,200 gallons of fuel, 10,800 gallons of water, 32 pallets of MREs, and ammunition, into the Burqan oil field. The mobile rushed north through clouds of smoke from the burning oil wells to catch and resupply Task Force Papa Bear before it attacked toward Kuwait International Airport. At 1600 and after traveling 25 kilometers, MCSSD-

*MCSSD-11 passes by burning oil wells enroute to its new position near Kuwait International Airport.*

Photo courtesy of Maj Adrian W. Burke



11 found the task force staged for its final attack. Burke set up two lines of trucks which in 30 minutes distributed 20 pallets of MREs, 12,300 gallons of fuel, and 5,200 gallons of water to all the major elements of Papa Bear. In addition, MCSSD-11 pushed repair parts received from CSSD-10 forward to the logistics operations center, the 1st Tank Battalion, and the 1st Battalion, 1st Marines. While Papa Bear attacked, MCSSD-11 consolidated all remaining fuel and water and sent the empty tankers back to CSSD-10 for more loads. At 1730, the mobile moved 13 kilometers north to an abandoned trenchline and bunker complex which was hastily cleared and occupied by the light of the burning oil wells. This position was 11 kilometers southwest of the Kuwait International Airport. Captain Burke ordered his troops to dig in and dispatched patrols to protect the perimeter. The mobile spent the evening at a state of 25 percent alert and listened to the 1st Tank Battalion fight Papa Bear's final engagement of the war.<sup>558</sup>

On the 26th as well, Company A, 7th Engineer Support Battalion moved with Task Force Papa Bear towards Kuwait International Airport. In the afternoon, Captain Salinas, the company commander, transferred the elements of the company which had been traveling in wheeled vehicles, to the Task Force's logistics train and continued the advance in tracked vehicles as part of the combat engineer detachment. Major Musca, the detachment commander, set the engineer force in a circular defensive perimeter, three kilometers south of Papa Bear and three kilometers west of the 1st Tank Battalion. At 2230 the wind shifted and blew away clouds of smoke from the oil well fires, which now illuminated the engineers' position. Almost immediately, the detachment received Iraqi mortar, RPG, and automatic weapons fire from the direction of the airport road. The engineers returned fire and destroyed an Iraqi armored personnel carrier, a jeep, and a truck. Lance Corporal James E. Waldron of Company A, 7th Engineer Support Battalion, was killed when the assault amphibious vehicle he was under pivoted to fire and crushed him in the process. Captain John M. Allison, the detachment's deputy commander, was shot in the face as he tried to rescue Waldron. No other Marines were injured in this action.<sup>559</sup>

Upon arriving at MCSSD-17's position on the 26th, CSSD-10 immediately set up its security, planned its next move, and provided combat service support. To enhance local security, Lieutenant Colonel Kelly, the CSSD's commander, sent the security detachment to search bunkers in the area thoroughly and to pull machine guns from the abandoned Iraqi tanks that littered the region.<sup>560</sup> In addition to resupplying MCSSD-17, CSSD-10 issued 15,000 gallons of fuel, 32 pallets of MREs, and 10,000 gallons of water to Task Force Shepherd and elements of the 11th Marines.<sup>561</sup> Kelly unloaded the engineer and medical detachments, but kept the remaining portion of the CSSD on trucks to move towards Kuwait International Airport.

In the afternoon, the CSSD commander drove north to scout a new site south of the Kuwait International Airport. While he was on his reconnaissance, the 1st Battalion, 25th Marines, requested that CSSD-10 evacuate the 7,000-8,000 enemy prisoners of war it was holding at Camp 4 near Al Jaber Air Base. Major Lucenta, CSSD-10's operations officer, replied that he only had two 5-ton trucks

available and could not support the request. Shortly afterwards, General Krulak arrived and inquired about the CSSD's ability to transport prisoners of war. Lucenta briefed the general that the only way he could evacuate prisoners was by shepherding them down the road with a 5-ton truck and its .50- caliber machine gun. After Krulak departed, Kelly returned to CSSD-10 having decided not to move the CSSD to the planned site since the division had advanced farther north than expected and that smoke from multiple oil well fires was poisoning the air in that area.<sup>562</sup> By the end of the day, CSSD-10, near Al Jaber, exhausted its stocks of MREs and had only 25,000 gallons of water and 15,000 gallons of fuel on hand. Accordingly, Kelly requested that the DSC push forward 100 pallets of MREs, 50,000 gallons of water, and 60,000 gallons of fuel from its new transfer point at Al Jaber Air Base.<sup>563</sup>

### *The Direct Support Command*

The return of trucks from the artillery regiments in the previous days permitted General Krulak, on the 26th, to establish a transfer point at Al Jaber Air Base. Krulak intended to store a two-day supply of food, water, fuel, and ammunition for both divisions on the far side of the obstacle belts. In addition, the DSC's transfer point would perform limited medical, maintenance, and salvage operations. On the morning of the 26th, Colonel Gary S. McKissock, II MEF's G-4, still on loan to the DSC, led a convoy through the breach to Al Jaber and waited the remainder of the day while Captain Stephen H. Negahnquet's explosive ordnance disposal (EOD) platoon cleared unexploded munitions near the air base.<sup>564</sup> Also arriving at Al Jaber were 75 Seabees from NMCBs -5 and -24 together with the advance party from I MEF headquarters. The Seabees intended to build General Boomer's forward command post and waited while DSC's EOD Marines labored to make the area safe. The next day, the Seabees returned to Saudi Arabia after I MEF canceled its plan to build a command post at Al Jaber.<sup>565\*</sup>

### *The Deluge of Enemy Prisoners of War*

On the evening of the 26th, 8,000 Iraqi captives reached the prisoner of war compound at Kibrit by means of an evacuation system jury-rigged by Generals Brabham and Krulak. Three days earlier, Brabham had called Krulak and asked for help in transporting prisoners. Although the 1st FSSG commander was responsible for moving enemy prisoners of war (EPWs) from the minefields to CSSD-91, he lacked the means to carry out this assignment because the relocation to Khanjar had wrecked havoc on the vehicles of Saudi Motors/the Baghdad Express. Krulak agreed that the DSC would help when the trucks carrying artillery rounds returned from Kuwait. Much to General Krulak's surprise,

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\*150 Marines and sailors from MWSS-271 arrived on the 28th to establish a FARP to support helicopter operations. (MWSS-271 ComdC Jan-Jun91, Sec 2 and 3; MWSS-37 ComdC Feb91, Sec 3)

however, the next morning the 1st FSSG ordered the DSC to transport all prisoners north of Mishab to CSSD-91. The DSC commander then called Brabham to clarify the tasking, but knowing the maintenance problems with Saudi Motors, began scouring the DSC for transportation to accomplish the mission.\* Krulak scrounged dump trucks from the 8th Engineer Support Battalion and a few 5-ton trucks from the 8th Motor Transport Battalion and sent them through the breach to haul EPWs to Kibrit. At Jubayl, General Brabham scraped together a convoy of buses and commercial Saudi vehicles, driven by clerks, dental technicians, and supply and maintenance personnel, and sent them north under the command of his aide.<sup>566</sup>

Upon learning earlier from General Keys when the ground war started that the deluge of surrendering Iraqis impeded combat operations, Krulak had ordered the DSC to begin immediately evacuating prisoners from the 2d Marine Division's zone of action. Accordingly, the DSC's assistant chief of staff for operations, Lieutenant Colonel John O'Donovan, ordered the 8th Engineer Support Battalion and the Headquarters and Services Battalion to build a compound rapidly at Khanjar to hold temporarily captured Iraqis until transportation could be arranged to CSSD-91. Within six hours, the DSC Marines: constructed a 10-acre facility surrounded by a berm and barbed wire; posted guards; stockpiled blankets, water, and MREs; and established medical services. While the camp was under construction, O'Donovan gathered volunteers, to include women Marines, as drivers and guards, and pressed into service buses and recovered Saudi Motors trucks. Off-duty staff non-commissioned officers from the DSC's combat operations center, like Gunnery Sergeant Douglas Hedges, led convoys of five to seven vehicles through the breaches and returned to Khanjar with loads of prisoners even before the 8th Marines crossed into Kuwait. By the end of the 26th, the DSC had shuttled 6,000 prisoners to Khanjar from the 2d Marine Division's zone.<sup>567\*\*</sup>

Elsewhere on the battlefield, the 1st Marine Division evacuated prisoners of war directly to Kibrit and around Jubayl, General Brabham gathered buses and sent them to Kuwait. By the 26th, the arrival of more buses from Jubayl allowed for EPWs to be evacuated directly from the 2d Marine Division zone to Kibrit without going through Khanjar. Also on the 26th, Lieutenant Colonel Woodson, the 8th Motor Transport Battalion's commanding officer, had retrieved enough trucks from supporting the artillery regiments to begin shuttling prisoners from Kuwait. At 1300, Woodson dispatched a 70-bed convoy into Kuwait.<sup>568</sup>

By the evening of the 26th, the 8,000 Iraqi prisoners who had arrived at Kibrit overwhelmed CSSD-91. The first thing to break down was the system for processing new prisoners. As planned, CSSD-91 gave newly arrived Iraqis a bottle of water, food, and a blanket, and then moved the captives directly into the holding pens. Soldiers and Marines sent the sick and injured to the medical facil-

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\*Gen Krulak described the capabilities of Gen Brabham's Saudi Motors/Baghdad Express at the beginning of the ground war as "clobbered." (Krulak comments)

\*\*On the establishment of the Khanjar enemy prisoner of war camp Gen Krulak commented that, "We were basically doing the one thing that logisticians don't like to do and that is double handle anything... it was not smart." (Krulak comments)





Photo courtesy of Col Thomas S. Woodson

*The 8th Motor Transport Battalion formed a convoy of LVSSs at Khanjar to pick up Iraqi prisoners in Kuwait. The trucks had just returned from hauling ammunition for the artillery.*

ity. Because of the large number of prisoners, only Iraqi officers were interrogated. Most of the prisoners were glad to be safely away from the bombing and content with the relative comfort of the camp. Unfortunately on that day, a wind storm blew down the mess hall and interrupted the feeding and the state of contentment of the Iraqis. The lack of food almost caused a riot which Lieutenant Colonel Sparrow, CSSD-91's commanding officer, narrowly averted by shipping in MREs from GSG-2. In addition to the problems caused by the weather, the Iraqis kept breaking the fragile plastic pipes of the water distribution system and opted to by-pass the culturally-correct wooden heads and conveniently placed slit trenches to relieve themselves by the perimeter fence. As masses of prisoners arrived, Lieutenant Colonel Sparrow discovered that his three holding compounds were too large to manage the Iraqis who could not hear instructions from the camp public address system. Despite these problems, CSSD-91 personnel dumped lime on the fence-lines, continued to fix the water distribution system, and moved Iraqi prisoners south after their brief stay at Kibrit.<sup>569</sup>

### *G+3: 27 February 1991*

*In the I MEF sector on 27 February, the 2d Marine Division began the fourth day of the ground war by holding positions...To the east, the 1st Marine Division consolidated its area, clearing the last pockets of resistance from around Kuwait International Airport....<sup>570</sup>*

The 27th began with the 2d Marine Division on its objective at Al Jahrah which the Tiger Brigade had captured at 2000 the previous day. The 1st Marine Division was in position to capture Kuwait International Airport and General Myatt maneuvered Task Forces Shepherd and Taro into position to seize this final MEF objective. On the 26th, Task Force Grizzly completed clearing operations at

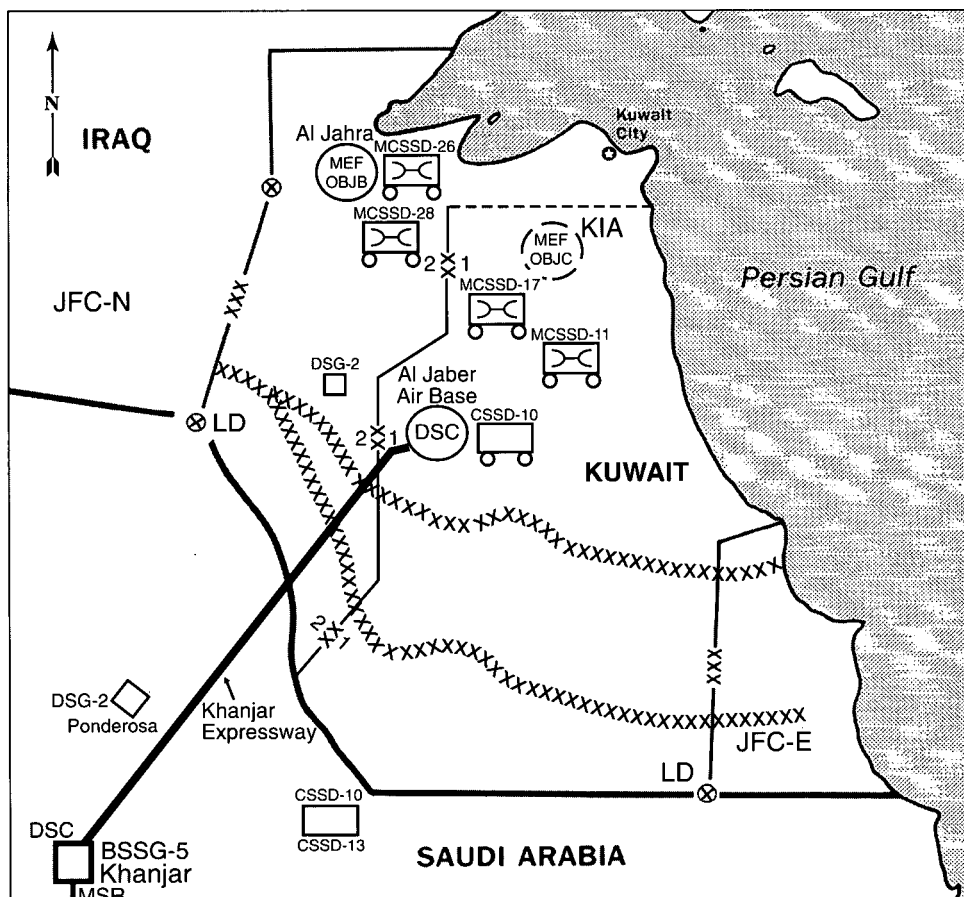


Al Jaber where the DSC established a transfer point to support the attacks on the final objectives and any subsequent actions. Both DSG-1 and DSG-2 planned to set up positions north of Al Jaber and near the MEF's northern objectives. Although the war was almost over, armed enemy remained a threat as the MCSSDs continued to support their assault task forces and regiments, closing in for the kill.

### *The 2d Marine Division Zone of Action*

At 0100, MCSSD-28 passed through the positions of the 3d Battalion, 10th Marines, and joined the 8th Marines on the outskirts of Kuwait City. A fistful of emergency resupply requests greeted Lieutenant Colonel Head who quickly organized a hasty defense and dispatched supply convoys to replenish the depleted regiment. At 0800, enemy soldiers wandered into MCSSD-28's position and surrendered. Head ordered the military police to investigate a position, to the southeast, where the prisoners had originated. At the enemy position, the MPs discovered three abandoned T-62 tanks with engines running and loaded gun tubes pointing at the mobile. Nearby, a battle then erupted between the 3d Battalion, 23d Marines, and the Iraqis. As rounds from the battle impacted within the

*DSC positions at the beginning of G+3: 27 February 1991*



mobile's position, Head ordered the M88A1 tank retriever to neutralize the abandoned Iraqi tanks. The retriever moved towards the tanks, received fire from a nearby treeline, suppressed the enemy fires with its machine gun, and disabled the Iraqi armor. At 1030, five Marine casualties from the infantry battalion arrived at the mobile which called for a medevac through the 2d Marine Division headquarters. At 1400, MCSSD-28's graves registration team processed the remains of a Marine from the 3d Battalion, 23d Marines, and later, another from the 4th Tank Battalion. At 1830, a resupply convoy from DSG-2 delivered fuel, water, and MREs and departed with the two dead Marines and documents confiscated from Iraqi prisoners.<sup>571</sup>

On the 27th, Lieutenant Colonel Hering moved DSG-2's transfer point 20 kilometers north of RPP Fournier to a position called the Ice Cube Tray, which became the focal point for combat service support operations in the 2d Marine Division's zone of action.\* Located 15 kilometers from MCSSD-26 and -28, Hering pushed water, fuel, and MREs to the mobiles and was quickly joined by additional units.<sup>572</sup> First to arrive was the advance party of Collecting and Clearing Company C after coming under enemy fire on its road march.<sup>573</sup> Later, the 8th Motor Transport Battalion's LVSs arrived with the first loads of DSG-2 as it relocated into Kuwait.<sup>574</sup>

Spread between the 2d Marine Division's zone of action and Al Jaber Air Base, the 8th Engineer Support Battalion established Combat Service Support Area 3 (CSSA-3) and continued its work in the minefields. Hulls' Company C maintained the breach lanes in the first line of mines and Hearnberger's Company B continued to labor in the second minefield. Danger still lurked in the breach as demonstrated when the HMMWV driven by Major Clifton D. Caldwell, the DSC's breach control officer, hit a mine. Caldwell was not harmed by the explosion, but the deeply planted anti-personnel mine that blew the rear axle off his vehicle was located at a spot in the road where a thousand vehicles had previously passed without incident.<sup>575</sup> On the 27th, Captain Negahnquet's EOD Marines completed clearing the area near Jaber Air Base of unexploded ordnance which allowed the 8th Engineer Support Battalion's Bravo command element and Company A to build a 100,000-gallon fuel point, ammunition dump, the DSC's combat operations center, and a 40,000-gallon water point. Colonel McKissock's convoy quickly moved in and began stocking the new CSSA. Meanwhile, Lieutenant Colonel Skipper led a reconnaissance party that discovered a complex of 45 boobytrapped water wells in the area.\*\* Captain Negahnquet's EOD Marines rapidly cleared the wells and Hatton's Company A began pumping water.<sup>576</sup>

### *The 1st Marine Division Zone of Action*

Early on the 27th, Colonel Powell started DSG-1's morning operations.

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\*The Ice Cube Tray received its name from its grid-like appearance on the map.

\*\*Maj William L. Poggi, Capt William M. Harrison, the battalion's sergeant major, and the chaplain accompanied LtCol Skipper on the water well reconnaissance. (Skipper comments)



Photo courtesy of LtGen James A. Brabham, Jr.

*Tanks from the 1st Marine Division close in on the Kuwait International Airport.*

Just after midnight, Powell led a convoy from CSSD-10's position near Al Jaber with food, fuel, and ammunition to the 1st Marine Division's forward command post, just south of Kuwait International Airport. After arriving, Powell sent the empty trucks back to CSSD-10 and remained at the division headquarters where he met with General Myatt. At dawn, Lieutenant Colonel Kelly dispatched CSSD-10's daily resupply convoys to MCSSD-11 and to MCSSD-17, including repair parts for Task Force Ripper. West of Kuwait International Airport, MCSSD-17 pushed 42 pallets of MREs, 21,000 gallons of water, and 37,000 gallons of fuel to Task Force Ripper, while MCSSD-17's commander, Captain Winter, pulled additional supplies from CSSD-10. In the trench line where MCSSD-11 stopped the night before, Captain Burke of CSSD-11 ordered an extensive search of the area which revealed an Iraqi Army command post, 12 bunkers of tank ammunition, and an armory. Burke ordered the weapons destroyed and drove four kilometers north to Papa Bear's logistics operation center to attend a meeting. While Burke was at the meeting, MCSSD-11 called for a medevac of 4 Marines, 14 wounded Iraqis, and 1 dead enemy soldier. The Marines would go by air and the Iraqis by ground transportation. After the meeting, Burke distributed ammunition, 24,700 gallons of fuel, 6,400 gallons of water, and 12 pallets of MRE to Papa Bear and the 5th Battalion, 11th Marines.<sup>577</sup>

At noon, CSSD-13 started DSG-1's afternoon operations by flying 385 rounds of artillery ammunition to the 3d Battalion, 12th Marines. Near Kuwait International Airport, CSSD-10's resupply convoy departed MCSSD-11's position with the dead Iraqi after completing its resupply mission.<sup>578</sup> Captain Burke sent the 14 wounded prisoners to the CSSA-3 at Al Jaber by ground transportation where his trucks picked up MREs and returned to his position. At 1616, Colonel Powell, who had moved to Kuwait International Airport with the division forward command element, ordered Lieutenant Colonel Luszczynski, DSG-1's executive officer, to move the command post to join him at the airport. Just about the same time, Task Force Papa Bear passed the word to MCSSD-11 that Kuwait

International Airport was secure.<sup>579</sup> By 1700, CSSD-10's supplies were becoming dangerously low, which forced Lieutenant Colonel Kelly to pull fuel and MREs from the DSC at Al Jaber and water from OP-4. Three hours later, Colonel Powell ordered CSSD-10 to move to the International Airport the next day and CSSD-13 to be ready to do the same in order to conduct arrival/departure air control operations and to support helicopter activities north and west of Kuwait City.<sup>580</sup> Near midnight, Powell scheduled a meeting for the 28th and ordered his commanders to bring their ammunition inventories.<sup>581</sup>

### *The Lost Convoy*

Lieutenant Colonel Woodson's 70-LVS-bed convoy with the Iraqi prisoners got lost in the dark on the 26th and wisely waited until the morning before picking up 2,000 Iraqis. The prisoners sat on the open beds of the trailers and hung on to cargo straps spread across the bed to keep from falling off. After passing through the obstacle belts on their way back to Khanjar, General Krulak met the convoy and sent them directly to CSSD-91 at Kibrit in order to save time and effort. Back at Khanjar, Lieutenant Colonel Woodson had expected his convoy to return by the morning and drove north to find it. Enroute, he met Lieutenant Colonel O'Donovan, the DSC's assistant operations officer, who told him that General Krulak had sent the convoy directly to Kibrit. Woodson then dispatched his battalion's executive officer, Major Robert L. Songer, to find the convoy. As Songer neared Kibrit, he noticed that the road was mysteriously covered with thousands of empty milk containers. At CSSD-91, Songer found the convoy and discovered the answer to the riddle of the empty milk cartons. As the convoy carrying the Iraqis approached Kibrit, it stopped to allow the Iraqis to relieve themselves. A passing truck carrying milk cartons slowed down to look at the Iraqis who leaped onto the milk truck and raided its cargo. The convoy drivers quickly restored order and loaded the Iraqis back on the LVSs, but not before the thirsty prisoners consumed most of the milk on the truck.<sup>582</sup>

*The LVSs of the 8th Motor Transport Battalion near Kibrit with their loads of Iraqi prisoners.*

Quilter, With 1 MEF



*G+4: 28 February 1991*

*The final day of the ground offensive found I MEF in defensive positions outside Kuwait City.<sup>583</sup>*

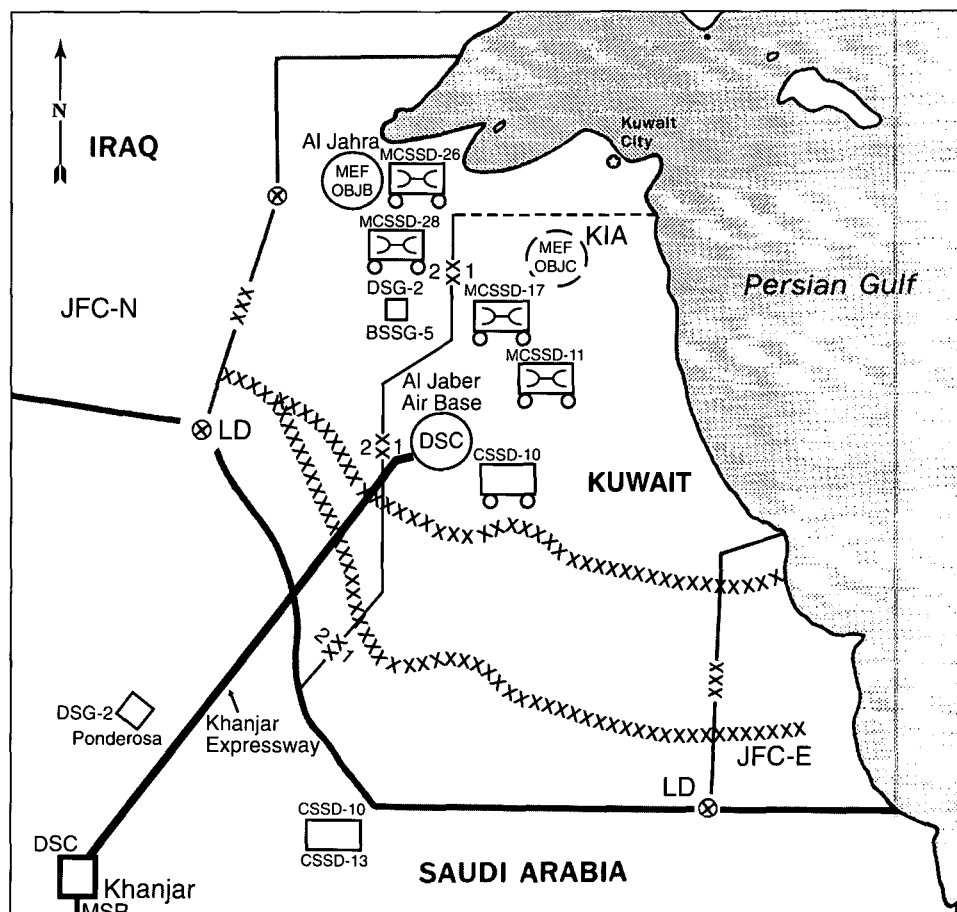
*The 1st Marine Division Zone of Action*

At 0400, Colonel Powell called General Krulak to brief him on DSG-1's planned activities. Krulak told Powell that the war was over. The DSG-1 commander spent the remainder of the day repositioning CSSDs, supporting the 1st Marine Division, and starting DSG-1's return to Saudi Arabia. At 0830, Lieutenant Colonel Kelly led CSSD-10 from near Al Jaber to a position along the runway at Kuwait International Airport. Kelly set up a collecting and clearing company and a refuelling point.<sup>584</sup> To replenish supplies, the DSC pushed 100 pallets of MREs to CSSD-10 which in turn pulled water and fuel from the DSC at Al Jaber. With CSSD-10 at Kuwait International Airport, Colonel Powell ordered Captain Ritchie to keep CSSD-13 at OP-4.<sup>585</sup> As Powell positioned his CSSDs, MCSSD-17 pushed supplies to the 3d Battalion, 11th Marines; the 3d Battalion, 12th Marines; and Task Force Shepherd, while MCSSD-11 resupplied the 1st Battalion, 1st Marines, and the 5th Battalion, 11th Marines. Captain Burke delivered his ammunition inventory to Colonel Powell at Kuwait International Airport and sent a convoy with all palletized munitions to GSG-2 at Ras Al Mishab.<sup>586</sup>

*The 2d Marine Division Zone of Action*

At 0500 on the 28th, guides from the three infantry battalions of the 8th Marines arrived at MCSSD-28 to lead resupply convoys to their battalion positions. After the morning resupply, the MCSSD spent the remainder of the day pulling supplies from DSG-2 and scheduling resupply missions for 1 March. As the ceasefire took effect, MCSSD-28 improved its positions and fell into a normal resupply routine with the 8th Marines and DSG-2. At the Ice Cube Tray, LVSs from the DSC and DSG-2, which finally trickled back from the 10th Marines and the Tiger Brigade, continued to move the organization into Kuwait. After dropping off its cargo, the 8th Motor Transport Battalion used 13 of its LVSs to move Collecting and Clearing Company C to Al Jaber Air Base.<sup>587</sup>

At RRP-26, MCSSD-26 coexisted with unexploded ordnance and supported the 6th Marines. The day before, Lieutenant Colonel Wittle ordered his command to dig in and to remove the numerous unexploded artillery projectiles and cluster bomblets that lay about the area. On the 28th, a HMMWV belonging to the engineer officer, First Lieutenant Brian S. Bartholf, hit a cluster bomb which damaged the vehicle without injuring the occupants. Despite the dangers of unexploded ordnance, MCSSD-26 pushed 26,600 gallons of water, 79 pallets of MREs, and 35,900 gallons of fuel to the 6th Marines on the 27th and 28th. In addition, MCSSD-26 dispatched four maintenance contact teams to repair equip-



*DSC positions at the beginning of G+4: 28 February 1991*

ment, treated 45 patients including 13 Iraqis, medevaced five Marines, and processed one dead Iraqi soldier.<sup>588</sup> On the 28th, Colonel Livingston visited RRP-26 and expressed his appreciation to a formation of all the Marines and sailors of MCSSD-26, for the superb combat service support they had given the 6th Marines.<sup>589\*</sup>

### *Brigade Service Support Group 5*

During the ground war, BSSG-5 supported the far-flung operations of the 5th MEB which landed to reinforce I MEF. On the 24th, the MEB arrived at Mishab and sent a battalion to Al Wafra to conduct a raid. BSSG-5, commanded by Lieutenant Colonel Robert E. Lupton, unloaded USS *Juneau* and *Mobile* and on the 25th, sent a small mobile carrying fuel, water, and MREs to Al Wafra to resupply the raid force.<sup>590</sup> Reaching Kibrit on the evening of the 25th, the BSSG commander discovered that the 5th MEB had moved to Khanjar.<sup>591</sup> The next morning, Lupton headed for CSSA-2 and directed the BSSG to follow him. At the

\*At Col Livingston's request, the 2d Marine Division included MCSSD-26 in its message requesting the award of the Combat Action Ribbon. (Warker comments)



Photo courtesy of LtGen James A. Brabham, Jr.

*5th MEB Marines attack towards Al Wafra in Kuwait. In the background can be seen fires from the burning oil wells.*

DSC, he found Brigadier General Peter J. Rowe, the 5th MEB's commanding general, and together, they decided to deploy the BSSG to the Ponderosa where it could support the MEB's prisoners of war and rear-area security operations. BSSG-5 arrived at Khanjar late on the 26th and early the next morning moved to the Ponderosa where Lupton learned that DSG-2 was moving into Kuwait. Knowing that the 5th Marines, the MEB's ground combat element, was operating near the Ice Cube Tray, Lupton decided to advance into Kuwait with DSG-2. Moving in a 100-truck convoy, the BSSG arrived near the Ice Cube Tray at 2200 on the 27th, established local security, and set up a combat service support area.<sup>592</sup>

The next morning, Lieutenant Colonel Lupton met with Colonel Randolph A. Gangle, the 5th Marines Commanding Officer, at Al Jaber Air Base. Gangle told Lupton that the 5th Marines had received a new mission to sweep the Al Wafra Forest area in Kuwait. The 5th Marines S-4 then requested resupply and three mobiles to accompany the regiment on a circuitous road march south into Saudi Arabia, east to Kibrit, and north into Kuwait to conduct clearing operations. Lupton rushed back to his camp near the Ice Cube Tray and moved BSSG-5 to Al Jaber where at 1520, he established a replenishment point to top off the regiment's vehicles. BSSG-5's bulk-liquid carriers replenished at DSG-2's Ice Cube Tray location and then departed with the three mobiles to Al Wafra. Afterwards, Lupton led the remaining portion of BSSG-5 back into Saudi Arabia and east towards Mishab to set up a base camp.<sup>593</sup>

### *Conclusion*

*The logistics trade is an essential element of the art of war.*<sup>594</sup>

At the end of February, I MEF held all of its objectives, Kuwait was free, and Saddam Hussein was “back in his box.” To ensure that he would not reinvade Kuwait, the 2d Marine Division consolidated its defenses around Al Jahra and the 1st Marine Division strengthened its positions at Kuwait International Airport. The DSC continued to provide combat service support from Khanjar and Al Jaber Air Base to DSG-2 at the Ice Cube Tray and CSSD-10 at Kuwait International Airport, while MCSSDs remained with their regiments and task forces. It was an effective system that could remain indefinitely in Kuwait, extend further to the north, or incrementally downsize while U.S. forces departed the region.

### Leaving the Gulf with Good Order and Discipline: 1 March-10 October 1991

#### *Introduction and BSSG-5*

*I knew my headquarters was about to turn into an administrative meat grinder. We had to start moving forces and equipment home—a happy but gigantic and complicated task—Gen H. Norman Schwarzkopf*<sup>595</sup>

While the 5th MEB conducted the last combat mission in Kuwait, I MEF’s planners switched their attentions to leaving the Gulf region. The defeat of Saddam Hussein made the world a safer place, but not a safe place. Crises brewed in Liberia, Yugoslavia, Ethiopia, Somalia, and northern Iraq, which might require Marine Corps units now in the area. To respond to unknown and emerging situations, I MEF needed to retrieve equipment, supplies, and ammunition spread over three Middle Eastern countries and then clean and fix all items before loading the materials on ships and aircraft. Although I MEF’s priority was to send units home, its main focus was to reconstitute the Maritime Prepositioning Force (MPF). As retrograde operations began, BSSG-5 wrapped up its support of the 5th Marines in Kuwait.

After a night road march from Al Jaber Air Base to Ras al Mishab, BSSG-5 established a camp to support the 5th Marines clearing operations in the Al Wafra Forest of Kuwait. On 1 March, one of BSSG’s three mobiles returned to Mishab from Al Wafra and at 1500 the next day, the 5th Marines requested 13,000 gallons of fuel, 3,000 gallons of water, 16 pallets of MREs, and a variety of repair parts. Using all available transportation, Lieutenant Colonel Lupton, the BSSG commander, dispatched the requested MREs and water, 70 percent of the parts, and 3,000 gallons of fuel. The resupply convoy arrived at Al Wafra on 3 March, just as the regiment ran out of fuel. The next day, the 5th Marines sent the empty



mobiles to Mishab where BSSG-5 began to load the 5th MEB on amphibious shipping. On 12 March, BSSG-5 returned to its ships after 16 days on land, began planning for a possible operation in Ethiopia, which did not occur, and sailed away from the Persian Gulf on board Amphibious Ready Group 3.<sup>596\*</sup>

*First in First Out; Last in Last Out: 1 March-22 April 1991*

At the beginning of March, the units that had first deployed to the Gulf started to leave. Commands that arrived in August and September 1990, such as the 1st Marine Division, the 1st MEB from Hawaii, the 3d MAW, the 3d NCR, and the 1st FSSG, began departing. Not forgetting about Saddam Hussein, General Boomer ordered the remaining units to maintain the Kuwait defenses and to assist I MEF's departure. Accordingly, the 2d Marine Division stayed in Kuwait and the 2d FSSG took over the support of the MEF as the 1st FSSG returned to Southern California. To reconstitute Marine Corps capabilities, Boomer ordered that the vast amount of equipment and supplies remaining around Khanjar and Kibrit be moved to the ports of Mishab and Jubayl. While the "last-in" units guarded the border and cleaned up the battlefield, I MEF's personnel strength shrank from 84,498 on 28 February to 19,743 on 16 April.<sup>597</sup>

*Deactivation and Home*

Very few Marines or sailors in I MEF had more time in the Gulf than those of DSG-1. On 1 March, Colonel Powell turned DSG-1 over to his executive officer, Lieutenant Colonel Luszczynski, and flew to the United States to attend a planning conference for the reconstitution of the Maritime Prepositioning Force. Before Colonel Powell's plane was in the air, Lieutenant Colonel Kelly returned to the United States on emergency leave.<sup>598</sup> Major Lucenta, the operations officer, took command of CSSD-10 at Kuwait International Airport, while Major Rice, the executive officer, sent people and equipment from OP-4 to Manifah Bay. The next day, MCSSD-11 moved to Kuwait International Airport and then relocated to CSSD-141's old Desert Shield location at Manifah Bay. From there, MCSSD-17, together with a detachment of engineers from CSSD-10, supported the 1st Marine Division's preparations to return to the United States.

On the 4th, MCSSD-11's and DSG-1's headquarters moved from Kuwait International Airport to Manifah Bay and started the deactivation process. On the way, Captain Burke refueled Task Force Papa Bear for the last time.<sup>599</sup> Two days later, all personnel from the 2d FSSG and a reserve ammunition detachment were added to the roles of CSSD-13 and transferred to the DSC. On the 9th, CSSD-10, MCSSD-11, and MCSSD-17 deactivated and Lieutenant Colonel Luszczynski pooled all personnel and equipment for final processing before returning them to

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\*After departing Saudi Arabia, BSSG-5 participated in disaster relief operations in Bangladesh. For details see Charles R. Smith, *U.S. Marines in Humanitarian Operations: Angels from the Sea, Relief Operations in Bangladesh, 1991*. (Washington D.C., Hist&MusDiv, HQMC, 1995)



Photo courtesy of LtGen James A. Brabham, Jr.

*Convoys carrying supplies and equipment arrive at the port of Jubayl to begin I MEF's retrograde from the Persian Gulf.*

their parent units. The remaining personnel and equipment from CSSD-10 moved to Manifah Bay, while a small detachment, commanded by First Lieutenant Clarke D. Henderson, briefly remained at Kuwait International Airport. The DSG-1 headquarters moved to Camp 3 near Jubayl, where it returned all remaining personnel and equipment to their parent commands and deactivated after conducting more than six months of combat service support operations in the desert.<sup>600</sup> Both Colonel Powell and Lieutenant Colonel Kelly returned to Saudi Arabia and developed tables of organization and equipment for a combat service support element that would support the MPF reconstitution.<sup>601\*</sup>

At Mishab, Colonel Hampton's GSG-2 briefly supported port operations and then deactivated. On 4 March, Hampton sent equipment to Jubayl as the first step in leaving the port of Mishab to the DSC. Port operations consisted of helping load the 5th MEB on amphibious shipping and 1st Marine Division equipment on U.S. Army coastal craft. Equipment and supplies began to arrive from remote locations and CSSD-91 emptied its holding pens, deactivated, and sent its remaining prisoners to Mishab. GSG-2 held the prisoners until the U.S. Army took custody of the Iraqis and transported them to their own facilities. On 10 March, Colonel Hampton relinquished command of Mishab after nearly three months of operations in which GSG-2 supported I MEF's ground attack and 9,000 U.S. military personnel operating in the northeastern part of Saudi Arabia.<sup>602</sup>

During the first half of the month, General Krulak's DSC supported the 2d Marine Division in Kuwait and the 1st Marine Division's retrograde to Saudi Arabia, and began the unenviable task of cleaning-up I MEF's equipment, the staging areas in Saudi Arabia, and the battlefield in Kuwait. Punsters dubbed the clean-up, "Operation Desert Shaft."<sup>603</sup> On 8 March, Colonel Woodhead, the DSC's chief of staff, ordered Lieutenant Colonel Skipper, the commanding officer of the 8th Engineer Support Battalion, to Jubayl to set up I MEF's vehicle

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\*Gen Krulak called Col Powell "A Great, Great Marine." (Krulak comments)



Photo courtesy of Maj Adrian W. Burke

*The Marines and sailors of MCSSD-11 pose for a final picture before deactivation. Although hard to see, MCSSD-11's Marines and sailors are either standing on or displaying an item of equipment that represents their support function.*

washdown site. The next day Hearnberger's Company B relocated from Kuwait to Jubayl and established a site with decontamination units, floodlights, and 3,000 gallon water tanks. The 8th Engineer Support Battalion's rapid action allowed cleaned equipment to depart Saudi Arabia by air.<sup>604\*</sup> On 10 March the DSC moved to Mishab and a week later, General Krulak redesignated the DSC as the 2d FSSG and reclaimed his battalions as the 1st FSSG returned to the United States. Ten days later, Krulak moved his headquarters to GSG-1's old location at Jubayl and replaced the 1st FSSG as the only force service support group in the Gulf region.<sup>\*\*</sup>

To support the 2d Marine Division, DSG-2 remained in Kuwait through March until early April and then deactivated. On 2 March, it had closed the transfer point at the Ice Cube Tray, moved to Al Jaber Air Base, took over the DSC's transfer point there, and had continued to support the 2d Marine Division.<sup>605</sup> The following day, Colonel Donnelly had relinquished command to Lieutenant Colonel Hering and returned to the United States on emergency leave.<sup>\*\*\*</sup> Over the following week, the DSG detached the supply, maintenance, and engineer sections and Collecting and Clearing Company A.<sup>606</sup> In early April, the 2d Marine Division returned to Saudi Arabia and left the 8th Marines as the only Marine combat force protecting Kuwait. Accordingly, DSG-2 returned to Saudi Arabia, left MCSSD-28 in Kuwait to support the 8th Marines, and deactivated. During its three-month existence, DSG-2 issued 1,519,350 gallons of water, 1,034,451 gal-

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\*Col Skipper commented that the 7th Engineer Support Battalion and the 1st FSSG staff assisted Company B to set up the wash down site. (Skipper comments)

\*\*After GSG-1 was deactivated, Col Pankey became the 1st FSSG's G-4 and was responsible for acquiring additional areas from the Saudis to wash and stage equipment. Pankey quickly obtained four large areas which he used for I MEF operations and later parcelled out to the U.S. and British armies for their retrograde activities. (Pankey comments)

\*\*\*BGen Krulak relieved Col Donnelly of his duties and he did not return to Saudi Arabia after his emergency leave. (Krulak comments)



Photo courtesy of LtGen James A. Brabham, Jr.

*Engineers from the 8th Engineer Support Battalion wash a five-ton truck and a 400-gallon water trailer at Jubayl.*

lons of fuel, and 2,992,796 MREs. It filled 644 orders for repair parts, and treated 286 medical cases.<sup>607</sup> After the ground war, MCSSD-26 stayed at RPP-26, detached its TOW and graves registration sections, and provided combat service support to the 6th Marines. After the infantry regiment returned to Saudi Arabia, Lieutenant Colonel Wittle, on 1 April, moved his mobile to Ras Al Mishab where it disbanded. In MCSSD-26's short existence it pumped and hauled 620,364 gallons of fuel and 981,050 gallons of water, filled more than 500 orders for repair parts, treated 369 patients, and drove 66,583 miles.<sup>608</sup>

As hostilities ended, from March forward, Navy Captain Johnson focused his Seabees' efforts on construction projects to support I MEF's departure from the Gulf and on sending his four battalions home. On 1 March, Johnson moved the regimental headquarters and NMCB-40 to the Port of Jubayl. Four days later, NMCB-5 moved to Jubayl, but temporarily left a detachment at Qaraah to maintain the roads. In mid-March NMCB-40's sailors departed Saudi Arabia, while their equipment followed over the next month on the MVs *Hauge*, *Obregon*, and *Bobo*. On 12 April, NMCB-5's personnel departed Saudi Arabia and were followed two weeks later by their equipment on board the MV *Lopez*. At Mishab, NMCB-70 built 120 new ammunition cells and two buildings for munitions cleaning and packing and at Shaikh Isa, NMCB-70's detachment relocated to Jubayl. On the 22d, Captain Johnson relinquished command of the 3d NCR to Captain W. A. Waters, USN, and departed Saudi Arabia. At Khanjar, NMCB-24 left a detachment and moved to the Industrial City of Jubayl where it refurbished the 2d Marine Division camp and loaded ships with equipment from NMCBs 5 and 40.<sup>609\*</sup>

During March and April, MWSG-37 temporarily continued operations in Kuwait, shut down its northern locations, fell back on the southern air bases, and began leaving the Persian Gulf. From Jubayl Naval Air Facility, MWSS-374 sent

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\*On 2 April, the Khanjar detachment rejoined the battalion at Jubayl.



Photo courtesy of Maj Peter M. Warker

*MCSSD-26 strikes its colors in Kuwait before returning to Saudi Arabia and deactivation.*

a detachment to Kuwait International Airport to relieve the Marines of MWSS-271 which arrived with the 1st Marine Division during the war.<sup>610</sup> Between 2 and 13 March, the MWSS-374 detachment refuelled 130 helicopters per day, repaired buildings, and provided morale-boosting hot food and showers to the 3d MAF's Marines restoring operations at the airport. On 14 March, 98 Marines from MWSS-271 at Tanajib replaced the MWSS-374 detachment, which returned to Jubayl Naval Air Facility where preparations for departure were underway. Three days later, MWSS-273 arrived at Jubayl Naval Air Facility from Lonesome Dove and Ras al Mishab. By 4 April, with MWSS-273 in place, MWSS-374 departed Saudi Arabia.<sup>611</sup> Ten days later MWSS-273 sent its advance party to Marine Corps Air Station, Beaufort, South Carolina, while the remainder of the squadron recovered, cleaned, inspected, and loaded equipment and AM2 matting on ships until mid-May.<sup>612</sup>

At the beginning of March, MWSS-271 was spread among Tanajib, Kibrit, OP-4, Al Jaber Air Base, and Kuwait International Airport. During the month, MWSS-271's Marines helped move MAG-26 from Lonesome Dove and MAG-16 from Tanajib and pulled 800,000 square feet of AM-2 matting off the sand at Tanajib and Kibrit. On the 14th, Lieutenant Colonel Richard H. Zegar, the squadron commander, sent Marines to Kuwait International Airport and a week later dispatched seven crash and fire rescue personnel to Mishab to help recover a crashed Saudi C-130 Hercules aircraft. At the end of the month and after recovering detachments from Mishab and Kuwait, MWSS-271 began moving to Shaikh Isa to relieve MWSS-373, which until 17 March had built staging and washdown areas and refueled aircraft, and then prepared for departure. As MWSS-271 arrived, MWSS-373 departed with the last of its Marines leaving on 17 April.<sup>613</sup> Five days later, Lieutenant Colonel Zegar relinquished command of MWSS-271 to Major Roger E. Penrod, who then closed Tanajib. By the end of the month, the squadron was at Shaikh Isa Air Base, Bahrain.<sup>614</sup>

At King Abdul Aziz Naval Air Station, MWSS-174 prepared the facility to return to the Saudis and departed the Gulf. Prior to handing over the airport, Lieutenant Colonel Chessum, the squadron commander, ordered that all bunkers and strongback tent frames be disassembled, the wood neatly stacked, the soccer stadium cleaned, all fighting holes filled, and berms and bunkers leveled. On 1



April, the squadron's advance party departed Saudi Arabia, while the remainder of its Marines cleaned equipment which was moved to the port, inspected, and accepted by the 2d FSSG, which would later load the equipment on MPS ships. On 24 April, MWSS-174 returned to Hawaii and left MWSS-273 at the Jubayl Naval Air Facility and MWSS-271 at Shaikh Isa, as the two remaining MWSSs in Southwest Asia.<sup>615</sup>

### *A Marine Corps Shame*

At the beginning of March, the DSC was faced with retrieving the huge amount of equipment and ammunition abandoned on the battlefield by rapidly departing units. A large percentage of the deserted equipment came off the ships of the MPS squadrons and was left behind by units that myopically viewed the care and return of their gear as someone else's responsibility. For example, General Krulak discovered a tank near a minefield and thought that it had been hit by enemy fire. After examining the tank and noting no battle damage, Krulak reasoned that the tank had broken down. When a mechanic tried to start the vehicle, the engine turned over smoothly. The using unit merely left the tank behind in its haste to leave Saudi Arabia. In addition to weapons there were deserted forklifts, bulldozers, and trucks.\* Another problem was the huge amount of ammunition that littered Kuwait and Northern Saudi Arabia. As the ground war progressed, rapidly advancing artillery batteries had found it easier to leave ammunition in the sand than to reload it on trucks. General Krulak called the abandonment of equipment and ammunition a "Marine Corps Shame."<sup>616\*\*</sup> To clean up after the divisions, the DSC initiated a battlefield hunt for deserted equipment and supplies. Using both helicopters and ground vehicles, the DSC staff searched every known position and route of advance in order to locate, mark, and plan for the recovery of orphaned materials. The DSC's recovery plans called for a larger version of Operation Roundup which the 1st FSSG's maintenance detachment conducted the previous October.<sup>617</sup>

### *Operation Desert Cleanup*

In addition to the material abandoned in Kuwait, most of the 15 days of supply stocked at Khanjar, the Ponderosa, and OP-4 remained at those locations. As the rear elements of both divisions departed, the 3d MAW abandoned Lonesome Dove, and Saudi Motors cleaned out Kibrit. This left the unglamorous,

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\*On one occasion, the DSC Marines found a buried HUMMWV when they saw its antennae poking through the sand. (Krulak comments) Maj Songer, the executive officer of the 8th Motor Transport Battalion, twice discovered LVs that were flipped over by a wrecker so that minor parts could be cut from the vehicles and used as repair parts. (Songer intvw, 19 Mar96)

\*\*Gen Krulak also called the abandonment of the MPS equipment "a tremendous lesson learned." To prevent this problem from occurring again, the Advanced Logistic Officer Course has implemented a case study that addresses the retrieval of MPS equipment and the methods for instilling a sense of responsibility in its operators. (Krulak comments)



Photo courtesy of Col Thomas S. Woodson

*The staff members of the 8th Motor Transport Battalion pose for their picture. LtCol Thomas S. Woodson, the battalion commander, is seated in the center of the first row.*

but necessary, burden of reclaiming all things of value to the battalion. As I MEF Marines, flushed with triumph, relaxed, took showers, boarded airplanes, and returned to well-deserved victory parades, the 8th Motor Transport Battalion, which had operated at surge capacity since early February, began another grueling period in which it hauled more tonnage and drove more miles than it had before the war.

During the first half of March, Lieutenant Colonel Woodson focused his battalion on cleaning out sites around Khanjar and supporting the 2d Marine Division in Kuwait. Woodson's first priority was to move the ammunition left at OP-4, the Ponderosa, and the numerous abandoned artillery sites scattered along the border and in Kuwait. Many of the battalion's drivers who had hauled ammunition into battle with the artillerymen, helped find the old battery positions. During the war, significant amounts of ammunition and equipment had bounced off the beds of trucks because of frayed cargo straps, strained banding, tired drivers, and washboard roads. The 8th Motor Transport drivers policed up the ammunition and equipment laying along the road and shipped it to Mishab.

By mid-March, trucks and drivers which had transferred to DSGs-1 and -2 for the ground war returned to the 8th Motor Transport Battalion. The return of his vehicles gave Lieutenant Colonel Woodson 400 trucks and the wherewithal to move the huge amount of ammunition and supplies that remained at Khanjar. The battalion dispatched 10 trucks every hour with ammunition and containers to the port of Mishab as well as continuing to carry supplies to the 2d Marine Division in Kuwait. The lack of materials-handling equipment, the Achilles heel of transportation, limited the amount of cargo hauled as truck drivers sat idle, while too few forklifts, cranes, and RTCHs slowly loaded trucks at desert sites and unloaded them at Mishab. By 25 March, the 8th Motor Transport Battalion moved all of the ammunition from Khanjar and then concentrated on hauling the remaining containers and cargo. The U.S. Army helped by picking up excess fuel. On 8



April, Woodson's battalion emptied Khanjar and moved into the 7th Motor Transport Battalion's camp at Mishab. From the port, the battalion continued to support MCSSD-28 and the 8th Marines in Kuwait, supervised the remnants of Saudi Motors, and cleaned supplies and equipment until early May.<sup>618</sup>

With more and more equipment and supplies arriving from the field, the 8th Engineer Support Battalion's washdown operations mushroomed. By 4 April, Lieutenant Colonel Skipper's Marines managed four washdown sites in the Jubayl area that could clean up to a thousand items per day. The sites used 20,000 gallon fuel bags, 600 gallon-per-minute pumps, crimped hand-service nozzles, and chlorinated reclaimed water to wash every item before it left Saudi Arabia. The engineers laid out a total of 24 amphibious assault fuel systems and three water systems at the four sites. After cleaning, U.S. Army customs agents and Department of Agriculture Customs inspectors checked each item before the Marines loaded it on either a ship or an airplane.<sup>619</sup>

### *Marine Force Southwest Asia: 21 April-10 October 1991*

*Marine Forces Southwest Asia (MARFORSWA) was established by the Commandant of the Marine Corps on 21 April 1991 . . . . The commander, MARFORSWA, was assigned the mission of control and support of the reconstitution . . . for the Maritime Prepositioning Force (MPF) . . . . —MARFORSWA Command Chronology*

### *21 April-24 June 1991*

On 21 April 1991, Marine Force Southwest Asia (MARFORSWA) activated, replaced I MEF, and began coordinating Marine Corps operations in the Persian Gulf region. Major General Norman E. Ehlert, a naval aviator who served two tours in Vietnam, commanded MARFORSWA. The new organization initially consisted of the 2d FSSG; the 2d Marine Division (Rear), commanded by the division's logistics officer, Colonel Morris O. Fletcher; the 3d Marine Aircraft Wing (Rear), led by Colonel Coop; the newly arrived Blount Island Command (Forward), commanded by Colonel William H. Harris; and the 3d NCR (Rear). During May and June, the lead elements of a Special Purposes Marine Air Ground Task Force (MAGTF) arrived in Saudi Arabia and replaced the units that fought in Desert Storm. As the desert war veterans departed and new forces arrived, MARFORSWA focused on reconstituting the MPF.

The mission of the Blount Island Command (Forward) was to reconstitute 12 of the 13 ships of the MPF by restoring MPSRon-2 to a status of fully mission capable and MPSRon-1 and -3 to a lesser condition of mission capable.\* Colonel Harris led the 88 members of the Blount Island Command, who planned and

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\*The 13th ship of the fleet, the MV *Lummus* was refurbished at Blount Island during the autumn of 1991. The MV *Fisher* was renamed the MV *Phillips* on 8 April 1991. (Blount Island Command [Forward] ComdC Aug91, Sec 2 and Ms. Marlene Venz, Military Sealift Command, Comment File)



Photo courtesy of CWO5 Thomas M. Sturtevant

*A forklift loads some of the 750 pallets of package petrol and lubricant at Khanjar for transportation to the port.*

directed the MPF reconstitution efforts executed by the 2d FSSG; a task-organized Naval Cargo Handling and Port Operations Group (NAVCHAPGRU); contract workers from the Bendix Field Engineering Corporation and DYNCORP, who prepared aviation support and ground material equipment for shipping, and teams of civil servants from Naval Weapons Stations Concord, California, and Charleston, South Carolina, who packed ammunition containers. This eclectic force of Marines, sailors, U.S. Government employees, and civilian contractors worked 24 hours a day to adhere to the loading schedule, competed for resources with residual Desert Storm commands, and successfully loaded three Maritime Prepositioning Ships before the end of June.

*An aerial view encompasses one of the four mammoth washdown sites operated by the 8th Engineer Battalion at Jubayl. The engineers used 20,000-gallon water bags to store the water used to clean equipment and supplies prior to leaving Saudi Arabia.*

Photo courtesy of LtGen James A. Brabham, Jr.





Photo courtesy of LtGen James A. Brabham, Jr.

*Containers are lined up at the Port of Jubayl to be loaded on board shipping.*

On 18 May, 20 Marines from the 3d FSSG on Okinawa arrived at Jubayl and were immediately joined by 121 Marines and sailors from the 1st FSSG in California and another 404 from the 3d FSSG. Landing with the last group from Okinawa was Colonel Paul M. Lee, Jr., a supply officer with a master's degree in materiel management from the Naval Postgraduate School, Monterey, California. Lee commanded the Combat Service Support Element (CSSE) of the Special Purpose MAGTF, which had the missions of assisting the Blount Island Command to reconstitute the MPF and of replacing the 2d FSSG.<sup>620</sup> As designed earlier by Colonel Powell and Lieutenant Colonel Kelly, the CSSE consisted of headquarters and services, engineer, landing support, maintenance, motor transport, and supply detachments. During June, the 2d FSSG (Rear) at Camp Lejeune sent 405 augmentees to the CSSE and the 1st FSSG dispatched an additional 311 logisticians to Saudi Arabia. These reinforcements increased the size of the CSSE to 1,519 Marines and sailors. Colonel Lee dispersed his detachments to similar units in the 2d FSSG to ensure continued smooth operations and turn over when the FSSG departed. In addition, Lee sent a detachment, commanded by Major Michael L. Collier, to Mishab to work under the command of the 2d FSSG.<sup>621</sup>

Between 13-14 May, the Security Detachment, 3d Marines, arrived from Hawaii to guard MARFORSWA, but also helped with the logistics burden. Lieutenant Colonel David A. Debruyne commanded 479 volunteers and individuals from the 1st Marine Brigade who had not served in the Gulf and represented some 75 different military occupational specialties. Debruyne organized his command into two companies, each having two platoons, and deployed the force to sites in Saudi Arabia and Bahrain. As camps closed, Lieutenant Colonel Debruyne sent personnel to the CSSE to assist operations. On 14 June, he sent 30 Marines to Mishab to help clean ammunition, later increased the number to 159, and dis-

patched personnel to help load MPF ships and work at FASP-2, near the Cement Factory Ridge.

The Aviation Command Element (ACE), MARFORSWA arrived at the end of May, relieved the last of the MWSS Marines, prepared ammunition for transportation, turned over bases to the Saudis, and loaded ships. On 8 June, Major Robert B. Finney replaced Major Bradley A. Corr, who briefly commanded the 110 Marines and sailors of the ACE. On 15 June, the ACE Marines loaded the SS *Cape Carthage*, which was the first ammunition ship loaded in Bahrain, at Mina Suliman. In Saudi Arabia, the ACE Marines relieved MWSS-273, whose rear party departed Jubayl Naval Air facility on 27 May.<sup>622\*</sup> The ACE then proceeded to return Jubayl Naval Air Facility, the ammunition supply point at Ras Al Ghar, and King Abdul Aziz Naval Air Station to the Royal Saudi Navy.<sup>623</sup>

In late April and early May, most of the remaining Seabees departed from Saudi Arabia and left a small party to load aircraft and ships at Jubayl until mid-June. On 25 April, NMCB-24 departed and, on 8 May, was followed by most of the personnel from NMCB-74. The latter battalion left a 110-man "delay party" which loaded airplanes and ships with the last of the Navy's equipment. On 8 May, the Seabees loaded equipment on three U.S. Air Force cargo aircraft destined for Turkey to support Operation Provide Comfort in Northern Iraq.<sup>\*\*</sup> Over the next month, NMCB-74's sailors loaded the MVs *American Condor*, *Cape Horn*, and *Oslo Polar*. On 13 June, the delay party departed Saudi Arabia and thus ended the Seabees tremendous contribution in the Gulf war. From August 1990 until June 1991, naval construction battalions had completed 6 million square feet of aircraft parking, built 9.9 million square yards of ammunition storage, erected camps for 37,500 people, set up mess halls that fed 100,000 people, maintained 400 kilometers of road, laid out two airstrips, and executed a variety of other projects which supported I MEF's victory in Kuwait.<sup>624</sup>

Between 21 April and 23 June, the 2d FSSG loaded ships and airplanes, and departed the region. In a nine-week period, the 2d FSSG packed 16 Military Sealift Command ships with unit equipment, started filling two ships with ammunition at Mishab, and help the Blount Island Command load the first three MPS ships, the MVs *Baugh*, *Phillips*, and *Hauge*. The 8th Engineer Support Battalion sheathed with wood the walls of three bulk cargo configured ships, so that they could carry palletized ammunition and blocked and braced ammunition on board the ships.<sup>625\*\*\*</sup> In less than two months, the 2d FSSG loaded 126,961 short tons of cargo on ships and 6,143 tons and 14,478 passengers on aircraft. On 6 May, the

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\*MWSS-271 turned over Shaikh Isa to Marine Logistics Squadron 16 on 16 May and departed for the United States. (MWSS-271 ComdC, Jan-Jun91, Sec 3)

\*\*For the history of Marine Corps humanitarian operations during Operation Provide Comfort see LtCol Ronald J. Brown, USMCR, *Humanitarian Operations in Northern Iraq, 1991: With Marines in Operation Provide Comfort* (Washington, D.C.: Hist&MusDiv, HQMC, 1995)

\*\*\*The 8th Engineer Support Battalion handled so much ammunition that its Marines and sailors began referring to themselves as the 8th Ammunition Support Battalion. In addition to loading ships, Capt Hulls' Company C repacked 232 containers and operated the night shift at FASP-2. (Skipper comments)

8th Marines and MCSSD-28 returned to Saudi Arabia and ended the Marine Corps deployment in Kuwait. The termination of operations in Kuwait allowed Lieutenant Colonel Woodson to move the remaining portion of the 8th Motor Transport Battalion from Mishab to Jubayl and to depart the Gulf. On the 31st, General Krulak replaced General Ehlert and started a 23-day tenure as the commanding general of MARFORSWA. On 1 June, the 8th Engineer Support Battalion washed the last of the 25,000 pieces of equipment that it cleaned since early March, and returned to Camp Lejeune 13 days later.<sup>626\*</sup> With Colonel Lee's CSSE in place, the 2d FSSG reduced its strength and on 23 June, General Krulak relinquished command of MARFORSWA to Brigadier General Gary E. Brown, an infantry officer who served two tours in Vietnam. The next day, Krulak departed Saudi Arabia and was immediately followed by the FSSG's rear party.<sup>627</sup>

### *24 June-10 October 1991*

General Brown took over a logistic-heavy organization of 2,236 Marines and sailors consisting of a command element; the ACE; the Security Detachment, 3d Marines; the CSSE; and the Blount Island Command (Forward). Over the next 108 days, Colonel Lee's CSSE assisted the Blount Island Command reconstitute the remaining nine ships of the MPF, provided combat service support to MARFORSWA, and ended the Marine Corps participation in Desert Storm. Colonel Lee's Marines reworked ammunition at Mishab and at FASP-2 as well as loaded ships at Mina Suliman, Jubayl, and Mishab.

On 23 June, Major Collier took charge of the 286 Marines and sailors of the CSSD at Mishab, who identified and disposed of unserviceable ammunition as well as cleaned, palletized, and loaded the munitions on ships. A week later, 24 civilians from the Naval Weapons Station, Concord, California, arrived to help load ammunition. On 8 July, the ground combat element sent teams of Marines to operate a washdown site, which operated 24 hours a day. From the end of June until 4 September, the CSSD loaded 48,502 short tons of ammunition on the SS *Cape Bon* (30 June), SS *Brij* (3 August), SS *Alten Bells* (20 August), SS *Gulf Trader* (23 August), and MV *Jean Lykes* (4 September), and its explosive ordnance technicians demolished 5,881 short tons of unserviceable ammunition. After the departure of the *Jean Lykes*, Major Collier sent personnel and equipment to Jubayl and closed Mishab on 18 September.<sup>628</sup>

Around the Jubayl area, the CSSE cleared the ammunition out of FASP-2, loaded nine Military Sealift Command ships, and assisted the Blount Island Command reconstitute the nine MPF ships. Captain Paul R. Wilson's landing support detachment loaded ships at Al Jubayl and Mina Suleiman and also passengers and cargo on board aircraft. Captain Daniel W. Elzie's engineer detachment blocked and braced ammunition on ships, stored fuel and water, operated generators, and destroyed unserviceable ammunition. Between 1 July and 10 October,

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\*In its three months of retrograde operations, Capt Negahnquet's EOD platoon destroyed 154,338 rounds of enemy ordnance, cleared 102 enemy vehicles, and destroyed 975 tons of U.S. unserviceable ammunition. (Skipper comments)



Photo courtesy of CWO5 Thomas M. Sturtevant

*Vehicles wait to be loaded on ships at the Port of Jubayl.*

First Lieutenant Julia A. Smith's motor transport detachment, using mostly commercial trucks, moved 102,476 short tons of cargo, 981,595 gallons of water, and 385,524 gallons of fuel. Major Michael J. Motes' supply detachment constructed 367 medical supply blocks, built 667 shipping boxes, loaded 62 40-foot containers with rations, and filled 330 containers with construction materials and spare parts. Major Henry Willis' maintenance detachment closed 1,626 work orders, deployed 44 contact teams to fix equipment, and then pitched in with working parties and drove vehicles to the pier. Captain Hector L. Melendez' headquarters and services detachment managed contracts, operated messhalls, ran computer systems, closed down the Marine Corps exchanges, and operated the Military Customs/Agricultural Section. Between July and October, the customs inspectors deployed 152 contact teams to inspect 2,779 vehicles, 2,125 containers, and 55,137 pallets of ammunition. The inspectors took over the washrack at FASP-2 and increased the daily throughput from 200 ammunition pallets to 900.<sup>629</sup>

Both the ACE and the Security Detachment conducted retrograde logistics operations. On 20 August, the ACE completed packing the MV *Hanjin Jedda* and SS *Aide* at Mina Suliman, and returned Shaikh Isa to Bahrainian control. At the Port of Jubayl, ACE personnel prepared ammunition for the SS *Aide* which loaded munitions in Saudi Arabia until 2 September. Two days later, the ACE departed Saudi Arabia without its commander, Major Finney, who remained with MARFORSWA until 10 October as an aviation planner.<sup>630</sup> As installations closed and the security requirement decreased, Lieutenant Colonel Debruyne sent personnel back to Hawaii. On 4 September, 30 Marines departed Saudi Arabia and were followed by 338 more Marines on the 18th. The remaining members of the security detachment guarded the main camps in Jubayl until MARFORSWA departed Saudi Arabia.<sup>631</sup>

On 10 October, Brigadier General Brown disestablished MARFORSWA, departed Saudi Arabia, and ended the Marine Corps deployment to the Persian





Photo courtesy of LtGen James A. Brabham, Jr.

*A Marine customs inspector signs off on an item. Between July and October 1991, officials inspected 2,779 vehicles, 2,125 containers, and 55,137 pallets of ammunition prior to loading them on board ships.*

Gulf. Departing with General Brown were the 109 Marines of the CSSE who returned to either the 1st, 2d, or 3d FSSG. Between April and October, MARFORSWA loaded 12 MPS ships and 34 Military Sealift Command Ships with 292,411 short tons of equipment and cargo and 112,334 short tons of ammunition. In addition to ships, the command loaded 17,723 personnel and 6,683 short tons of cargo on 173 aircraft.<sup>632</sup>

### *Conclusion*

*"I can only say that I have never worked with or observed a more dedicated group of Marines and Sailors in my Life."<sup>633</sup>*

Between August 1990 and October 1991, The Marine Corps quickly sent forces to the Persian Gulf, freed Kuwait, and rapidly reconstituted its capabilities to respond to other crises. The MPF and Marines afloat gave the Marine Corps the ability to respond rapidly, while the professionalism of its combat service support forces gave the Corps the capability to accomplish its mission. The 1st and



2d FSSGs unloaded ships and aircraft and pushed supplies and services to the ground and aviation combat elements. Generals Brabham and Krulak welded together a general and direct system that extended from Kuwait to Bahrain. To defeat Saddam Hussein, General Krulak's Marines and sailors moved with the ground attack, while General Brabham used every conceivable means of transportation to push supplies forward. The five squadrons of Colonel Coop's MWSG-37 provided direct support to the 3d MAW's helicopters and fixed-wing air groups and the Seabees of Captain Johnson's 3d NCR built facilities from Bahrain to Kuwait. Not resting on the laurels of victory, the 2d FSSG recovered the Marine Corps' ammunition capability and, together, with the Blount Island Command, began reconstituting the MPF. Replacing the FSSG, the Combat Service Support Element of Marine Forces Southwest Asia completed the rebuild of the MPF, departed Saudi Arabia, and ended the war of logistics.



## Notes

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Unless otherwise noted the material in this section is derived from: CG 7th MEB\CG I MEF (Fwd) Situation Reports 001-021 for the period 12Aug-3Sep90, hereafter 7th MEB Sitrep(s) 001-021; CG 7th MEB\CG I MEF (Fwd) Logistics Status Reports 002 and 005-016, for the period 19Aug-2Sep90, hereafter, 7th MEB Logstat(s) 002 and 005-016; CG 1st FSSG, Situation Reports 003-007, 009-016, and 018, for the period 16-31Aug90, hereafter 1st FSSG SitRep(s) 003-007, 009-016, and 018; DSG-1 ComdC, 8Aug-3Sep90, hereafter DSG-1 ComdC; MWSS-373 ComdC, 1Jul-31Dec90, hereafter MWSS-373 ComdC; MWSS-374 ComdC Jul-Dec90, hereafter MWSS-374 ComdC; 7th MEB ComdC 1Jul-3Sep90, hereafter 7th MEB ComdC; 4th MEB ComdC Jul-Oct90, hereafter 4th MEB ComdC; CO Naval Construction Battalions, U.S. Pacific Fleet, Ltr to CNO, Subj: Naval Construction Force Support of Operation Desert Shield\Desert Storm, dtd 23 Jan92, hereafter "Naval Construction Force Support"; Marine Corps Research, Development, and Acquisition Command, TM 11240-15/4A, *Motor Transport Characteristics Manual*, 29Mar91, hereafter TM 11240-15/4A; Marine Corps Research, Development, and Acquisition Command, TM 11275-15/3C, *Engineer Equipment Characteristics Manual*, 29Mar91, hereafter TM 11275-15/3C; Capt Adrian Burke intvw, 9Dec90 (Oral HistColl, MCHC, Washington, D.C.), hereafter Burke intvw, 9Dec90; CG MCCDC, FMFM 4-1, *Combat Service Support Operations*, 12Jul93, hereafter, FMFM 4-1. All command chronologies, unless otherwise noted, are located in the Marine Corps Historical Center, Washington, D.C.

1. BGen Charles C. Krulak, USMC, "A War of Logistics," *U.S. Naval Institute Proceedings*, November, 1990, reprinted in Maj Charles D. Melson, USMC (Ret), Evelyn A. Englander, and Capt David A. Dawson, USMC, *U.S. Marines in the Persian Gulf, 1990-1991: Anthology and Annotated Bibliography*, (Washington: HistBr, HQMC, 1992) p. 162, hereafter, Krulak, "A War of Logistics."
2. Department of Defense, *Final Report to Congress: Conduct of the Persian Gulf War* (Washington D.C.: Government Printing Office, 1992), pp. 33-36, hereafter, *DoD, Final Report to Congress*.
3. BGen Edwin H. Simmons, USMC (Ret), "Getting Marines to the Gulf," *U.S. Naval Institute Proceedings*, May, 1991, reprinted in *U.S. Marines in the Persian Gulf, 1990-1991: Anthology and Annotated Bibliography*, (Washington: HistBr, HQMC, 1992) p. 11, hereafter, Simmons, "Getting Marines to the Gulf"; Biography of Gen Walter E. Boomer, USMC (Ret), HQMC Public Affairs Division, 15Sep94; Biography of MajGen James M. Myatt, USMC, HQMC Public Affairs Division, 14Sep95; Biography of MajGen Royal N. Moore Jr., USMC (Ret), Public Affairs Division, 3Jul92.
4. Simmons, "Getting Marines to the Gulf," p. 17.
5. Col Alexander W. Powell, comments on draft, Feb97, Author's Files, MCHC, hereafter Powell comments; Maj Adrian W. Burke, comments on draft, n.d.

[Feb97?], Author's Files, MCHC, hereafter Burke comments.

6. DSG-1 ComdC, Sec 2.

7. Ibid., Sec 3, and Biography of MajGen John I. Hopkins, USMC (Ret), HQMC Public Affairs Division, 2Feb93.

8. 1st FSSG Sitrep 004.

9. Burke comments.

10. 7th MEB Sitreps 001-003, and 010; 7th MEB ComdC, Secs 2 and 3; DSG-1 ComdC, Sec 3.

11. MWSS-373 ComdC, Sec 1; MWSS-374 ComdC, Sec 1; MWSSG-37 ComdC Feb90, p.5.

12. MWSS-373 ComdC, Secs 1-3.

13. MWSS-374 ComdC, Sec 1-3; 7th MEB Sitrep 014.

14. 7th MEB ComdC, Sec 2.

15. BGen James A. Brabham, Jr., USMC, "Training, Education Were the Keys," *U.S. Naval Institute Proceedings*, November, 1990, reprinted in *U.S. Marines in the Persian Gulf, 1990-1991: Anthology and Annotated Bibliography*, (Washington:HistBr, HQMC, 1992) p.34, hereafter, Brabham, "Training"; 7th MEB Sitreps 002 and 004.

16. Simmons, "Getting Marines to the Gulf," p. 8.

17. BSSG-1 ComdC, Jan-Jun91, Pt IV.

18. 7th MEB Sitreps 014, 015, and 018.

19. Ibid.; 7th MEB ComdC, Secs 2 and 3.

20. Biography of Gen Charles C. Krulak, USMC, HQMC Public Affairs Division, 30Jun95.

21. 4thMEB ComdC, Secs 1-3.

22. Ibid., Secs 2 and 3; Simmons, "Getting Marines to the Gulf," p. 19.

23. 13th MEU Weekly Sitrep 37-90 for 25-30Aug90; MSSG-13 ComdC, 1Jan-30. June90, Secs 1-4.

24. John Burlage, "Seabees Build for Battle," *Navy Times*, 24Dec90, pp. 12-13.

25. "Naval Construction Force Support."

26. FMFM 4-1, pp. 10-3 and 10-4.

27. Capt Michael R. Johnson, CEC, USN, comments on draft, 20Mar97, Author's Files, MCHC, hereafter Johnson comments.

28. COMCPAC Foxtrot Delta ComdC, Aug-Sep90, Sec 1.

29. 7th MEB Sitrep 021.

30. "Naval Construction Battalion Support," pp. 1, 4, and 10-13.

31. Brabham, "Training," p. 34.

32. 1st FSSG Sitrep 004.

33. 7th MEB Sitrep 021.

34. 7th MEB ComdC, Sec 2; 7th MEB Sitreps 018-021; "Naval Construction Battalion Support," pp. 11-12; and 4th MEB ComdC, Sec 3.

35. Ibid.

36. Burke intvw, 9Dec90.

37. 7th MEB Sitrep 006.

38. Author telecon with Dr. John Leland, Historian for the Air Mobility Command, Scott Air Force Base, 15Aug95. Dr. Leland researched Military

Airlift Command Situation reports and the Crises Response Team Log book to determine the date of 16 August 1990.

39. Burke intvw, 9Dec90.

40. 7th MEB Sitreps 004, 005, and 008; 7th MEB ComdC, Sec 2.

41. LtCol Charles H. Cureton, USMCR, *U.S. Marines in the Persian Gulf, 1990-1991, With the 1 Marine Division in Desert Shield and Desert Storm*, (Washington: HistBr, HQMC, 1993), Anx B, hereafter, Cureton, *With 1st MarDiv*; MWSSG-37 ComdC, Feb91, p. 5.

42. 7th MEB Sitreps 010 and 016.

43. 7th MEB Sitreps 006, 013, and 021.

44. 7th MEB Logstats 007 and 012; 7th MEB Sitrep 016.

45. BSSG-1 ComdC, 1Jan-Jun91, Pt IV.; 7th MEB Logstats 014 and 016; and 7th MEB Sitrep 016.

46. DSG-1 ComdC, Sec 2.

47. TM 11240-15/4A, pp. 2-59, 2-60, and 4-21—4-28; TM 11275-15/3C, pp. 2-125 and 2-126; Battlefield Assessment Team Tape # 136 14Mar91 (MCU Archives: Quantico, Va), hereafter these tapes will be designated BAT tape with number; Col Thomas S. Woodson, comments on draft, 24Feb97, Author's files, hereafter Woodson comments.

48. DSG-1 ComdC, Sec 4; MWSS-373 ComdC, Sec 4; MWSS-374 ComdC, Sec 1.

49. TM 11275-15/3C, p. 2-36.

50. DSG-1 ComdC, Sec 4; MWSS-373 ComdC, Sec 4; MWSS-374 ComdC, Sec 1.

51. DSG-1 ComdC, Sec 4; MWSS-373 ComdC, Sec 4; MWSS-374 ComdC, Sec 1; TM 11275-15/3C, pp. 2-64, 2-66, and 2-77.

52. DSG-1 ComdC, Sec 4; MWSS-373 ComdC, Sec 4; MWSS-374 ComdC, Sec 1; TM 11275-15/3C, p. 2-166.

53. DSG-1 ComdC, Sec 4; MWSS-373 ComdC, Sec 4; MWSS-374 ComdC, Sec 1; TM 11275-15/3C, p. 2-82.

54. DSG-1 ComdC, Sec 2.

55. 7th MEB, Order No. 001, 18Aug90, Item No. 14, Supporting Documents, 7th MEB ComdC.

56. 7th MEB Sitrep 013.

57. Burke comments.

58. Burke intvw, 9Dec90; Brabham, "Training," p. 35.

59. DSG-1 ComdC, Secs 1, 2, and 4; 7th MEB ComdC, Sec 2; 7th MEB Sitreps 018 and 021-023; 7th MEB Logstats 015 and 018.

60. DSG-1 ComdC, Secs 1, 2, and 4.

61. 7th MEB Logstat 015.

62. 7th MEB Sitrep 007.

63. 7th MEB Logstats 012, 014, and 015.

64. 7th MEB Sitreps 010, 011, 014, and 016; 7th MEB Logstat 010.

65. 7th MEB Logstats 012 and 016; 7th MEB Sitrep 019.

66. 7th MEB Logstats 012, 014, and 015; 7th MEB Sitrep 013.

67. LtCol Felix M. Bush, USMC comment file

68. DSG-1 ComdC, Secs 1, 2, and 4; FMFM 4-1, pp. 11-3 and 11-4.
69. 7th MEB Sitreps 014 and 016.
70. 7th MEB Logstats 007 and 008; 7th MEB Sitrep 009 and 15; 7th MEB ComdC, Sec II.
71. 7th MEB Sitreps 007-018; 7th MEB Logstats 014-016.
72. DSG-1 ComdC, Secs 1, 2, and 4.
73. DSG-1 ComdC, Secs 1, 2, and 4.
74. Ibid.; 7th MEB ComdC, Sec 2; 7th MEB Logstat 016.
75. 7th MEB Logstats 005, 010, and 016; MSgt Larry Crabtree, "A *Chronology of Operation Desert Shield/Storm*," Food Service Information Memorandum: Commemorative Edition, 1991 compiled by the Services Branch (LFS), HQMC, p. 4; Paul King, "The Long Wait," *Food Management*, Dec 91, vol 25, No. 12, reprinted in *Food Service Information Memorandum: Commemorative Edition*, p. 13; Ms Sue Meeker, Deputy Branch Head (LFS) HQMC, E-mail to author, 26Feb95.
76. 7th MEB Sitreps 017, 019, and 020.
77. 1st FSSG ltr to CMC, Subj: After Action Report for Contracting, Operation Desert Shield/Storm, 3Mar91, p. 14.
78. 7th MEB Logstats 006, 011, 013, and 014.
79. GSG-1 ComdC, Sep90, encl 7.
80. DSG-1 ComdC, Secs 1, 2, and 4; 7th MEB Sitreps 009 and 012.
81. 7th MEB Sitreps 013, 015, 019, and 020.
82. 7th MEB Sitrep 016.
83. FMFM 4-1, p. E-4.
84. Burke intvw, 9Dec90; 7th MEB Sitrep 014.
85. Burke intvw, 9Dec90; 7th MEB Sitreps 017-019; Burke comments.
86. DSG-1 ComdC, Secs 1 and 2.
87. 7th MEB Sitreps 013, 017, and 019.
88. 7th MEB Logstat 009.
89. 7th MEB Sitreps 014 and 021.
90. MWSS-374 ComdC, Sec 2.
91. Ibid.; 7th MEB Logstat 014.
92. 7th MEB Logstats 012, 014 and 015; MWSS-374 ComdC, Sec 1.
93. HMM-462 ComdC, 4Aug-3Sep90; HMM-463 ComdC Sep90; HMM-465 ComdC 3-30Sep90; HMM-466 ComdC 20Aug-2Sep90; 7th MEB Sitreps 011 and 021.
94. MWSS-373 ComdC, Secs 1, 2, and 3.
95. 7th MEB Logstat 014.
96. DSG-1 ComdC, 8Aug-3Sep90, Secs 1 and 2; 7th MEB Sitrep 013; GSG-1 ComdC, Sep 90, Encl 7; 7th MEB Logstat 016.
97. 7th MEB Sitrep 021.
98. 7th MEB Logstat 014.
99. DoD, *Final Report to Congress*, pp. 31-32 and 40; Michael R. Gordon and General Bernard E. Trainor, *The Generals' War: The Inside Story of the Conflict in the Gulf*, (Boston: Little, Brown and Company, 1995), pp. 68-69, hereafter *The Generals' War*.

100. I MEF ComdC 3-30Sep90, Sec 2; MarCent Sitrep 025.
101. Simmons, "Getting to the Gulf," pp. 12 and 20.
102. 3d FSSG ComdC July-Dec90, Secs 2 and 3.
103. Brabham "Training," p. 35.
104. 1st FSSG ComdC 3-30Sep90, Sec 2.
105. BAT Tape 880.
106. Ibid.
107. 1st FSSG ComdC 3-30Sep90, Sec 2.
108. BAT Tapes 416 and 406.
109. 1stFSSG ComdC 3-30Sep90, Secs 2 and 3.
110. BAT Tape 316.
111. LtCol Richard L. Kelly intvw, 9Dec90 (Oral HistColl, MCHC, Washington, D.C.), hereafter Kelly intvw, 9Dec90; 1st FSSG Sitrep 014.
112. 1st FSSG ComdC 3-30 Sep90, Secs 2, 3, and 4.
113. GSG-1 ComdC Sep90, Sec 2.
114. 1st FSSG ComdC 3-30Sep90, Secs 1-4; GSG-1 ComdC Sep90, Secs 1 and 2 and Encls 1-8.
115. 1st FSSG ComdC 3-30Sep90, Sec 1-4.
116. "Naval Construction Force Support," p. 13.
117. 3d MAW ComdC 3-30Sep90, Secs 1, 2, and 3; VMO-2 ComdC Sep90.
118. Ibid.
119. "Naval Construction Force Support," pp. 4, 5, 14, and 15.
120. COMCBPAC FD ComdC 3-30Sep90; "Naval Construction Battalion Support," pp. 4, 5, and 11.
121. MarCent SitRep 042; "Naval Construction Force Support," p. 12.
122. COMCBPac FD ComdC Oct90, Secs 1 and 2; "Naval Construction Force Support," pp. 4, 5, 11, and 12.
123. 3d MAW ComdC, 3-30Sep90, Sec 2.
124. MarCent Sitrep 022.
125. MarCent Sitrep 031.
126. MAG-16 ComdC Sep90, Secs 2 and 3; HMLA-369 ComdC Sep90, Secs 2 and 3; HMMH-462 ComdC Sep90, Secs 2 and 3; HMMH-465 ComdC Sep90, Secs 2 and 3; HMMH-463 ComdC Sep90, Secs 2 and 3; HMMH-466 ComdC Sep90, Secs 2 and 3.
127. MWSS-374 ComdC; "Naval Construction Force Support," p. 14.
128. "Naval Construction Force Support," pp. 4, 5, and 13.
129. HMLA-367 ComdC Sep90, Sec 2; "Naval Construction Force Support," p. 14.
130. MWSS-374 ComdC, Secs 3 and 4; MWSS-174 ComdC Sep90, Secs 2 and 3.
131. GSG-1 ComdC Oct90, Encl 6; DSG-1 ComdC Oct90, Secs 2 and 3.
132. MWSS-174 ComdC Sep90, Sec 1, 2, and 3.
133. "Naval Construction Force Support," pp. 13 and 14.
134. MWSS-174 ComdC Oct90, Secs 2 and 3; GSG-1 ComdC, Oct90, Encl 6; "Naval Construction Force Support," p. 14.
135. MWSS-174 ComdC Sep90, Secs 2 and 3.



136. Ibid.
137. GSG-1 ComdC 3-30Sep90, Encls 6 and 7.
138. MWSS-373 ComdC, Secs 2 and 3; "Naval Construction Force Support," pp. 4, 5, and 14.
139. MWSS-373 ComdC, Secs 2 and 3.
140. DSG-1 ComdC 3-30Sep90, Sec 2; 1st FSSG Sitrep 024.
141. MWSS-373 ComdC, Secs 2 and 3.
142. DSG-1 ComdC 03-30Sep90, Sec 2.
143. Burke comments.
144. MarCent SitReps 042 and 056; Cureton, *With the 1st MarDiv*, p. 13.
145. 1st FSSG SitRep 026; Burke intvw, 9Dec90; Burke comments.
146. FMFM 4-1, p. E-9.
147. GSG-1 ComdC 3-30Sep, Encl 3.
148. DSG-1 ComdC 3-30Sep90, Sec 2; Burke comments.
149. MarCent SitRep 048.
150. MWSS-374 ComdC, Secs 2 and 3; MWSS-174 ComdC Sep90, Secs 2 and 3.
151. FMFM 4-1, p. 11-3; GSG-1 ComdC 3-30Sep90, Encl 8.
152. GSG-1 ComdC 3-30Sep90, Encl 8; Burke comments.
153. 1st FSSG Sitrep 0025; DSG-1 ComdC 3-30Sep90, Sec 2; Burke intvw, 9Dec90.
154. Kelly comments.
155. 1st FSSG Sitrep 024; Author telecon with Col Richard Kelly, 25Jan96, hereafter Kelly telecon; MarCent Sitreps 042 and 056.
156. LtCol Kelly intvw, 9Dec90; Kelly telecon; Kelly comments.
157. 1st FSSG SitReps 010 and 026; Kelly comments.
158. BAT Tape 247.
159. 1st FSSG SitRep 017; 1st MarDiv ComdC 3-30Sep90, Sec 2.
160. 1st FSSG Sitrep 026; GSG-1 ComdC 3-30Sep90, Encls 3 and 8.
161. MarCent Sitrep 023.
162. "Naval Construction Force Support," pp. 4, 5, and 15; GSG-1 ComdC 3-30Sep90, Encl 3.
163. I MEF ComdC 3-30Sep, Sec 1.
164. *The Generals' War*, p. 69; Col Charles J. Quilter II, USMCR, *U.S. Marines in the Persian Gulf, 1990-1991, With the I Marine Expeditionary Force in Desert Shield and Desert Storm*, (Washington: HistBr, HQMC, 1993) p. 14, hereafter, Quilter, *With I MEF*; Cureton, *With the 1st MarDiv*, p. 15.
165. Quilter, *With I MEF*, p. 14; MarCent Sitreps 079 and 090.
166. MarCent Sitreps 055-059.
167. Cureton, *With the 1st MarDiv*, pp. 14-15.
168. DSG-1 ComdC Oct90, Sec 2.
169. Ibid.; BAT Tape 316; DSG-1, "Incorporation of Ammunition Company, Supply Detachment Into Direct Support Group-1," 6Oct90.
170. DSG-1 ComdC Oct90, Sec 2.
171. Burke comments.
172. Burke intvw, 9Dec90.

173. Kelly comments.
174. GSG-1 ComdC Oct90, Encl 6.
175. 1st MarDiv ComdC Oct90, Sec 2.
176. Kelly intvw, 9Dec90.
177. GSG-1 ComdC 3-30Sep90, Sec 2.
178. GSG-1 ComdC Oct90, Sec 2.
179. GSG-1 ComdC 3-30Sep90, Encl 3.
180. GSG-1 ComdC Oct90, Encl 3.
181. GSG-1 ComdC 3-30Sep90, Encl 5.
182. GSG-1, ComdC Oct90, Encl 5.
183. GSG-1 ComdC Oct90, Encl 8.
184. Ibid., Encls 7 and 8.
185. Ibid.
186. GSG-1 ComdC 3-30 Sep90, Encl 7; GSG-1 ComdC Oct90, Encl 7.
187. GSG-1 ComdC 3-30 Sep90, Encl 4; I MEF ComdC Sep90, Sec 3.
188. GSG-1 ComdC Oct90, Encl 4.
189. FMFM 4-1, p. 8-2.
190. Author telecon with Col William D. Bushnell, 5Jan97.
191. GSG-1 ComdC 3-30Sep90, Encl 2; Kelly comments.
192. LtCol Felix Bush Comments
193. GSG-1 ComdC Oct90, Encl 6.
194. GSG-1 ComdC 3-30Sep90, Encl 6.
195. I MEF ComdC 3-30Sep90, Sec 2 and 3; LtCol Cassady intvw (Oral HistColl, MCHC, Washington, D.C.) 25Nov90; FMFM 4-1, p. 12-10.
196. H&SG ComdC Oct90, Secs 1 and 2.
197. MajGen Harry W. Jenkins, Jr. USMC, letter, *Marine Corps Gazette*, Feb93, p. 50.
198. Biography of MajGen Harry W. Jenkins, Jr., USMC (Ret), (HQMC:PAO 2 June 1995).
199. Maj Charles M. Herndon, Jr., USMC, "Amphibious Forces and the Gulf War," *Marine Corps Gazette*, Feb93, pp. 76-77, hereafter Herndon, "Amphibious Forces"; MajGen Harry W. Jenkins, Jr., USMC, letter, *Marine Corps Gazette*, Feb93, p. 50; LtCol Ronald J. Brown, USMCR, "Marine Forces Afloat in Southwest Asia 1990-91," *Marine Corps Gazette*, Nov92, pp. 60-61, hereafter, Brown, "Marines Afloat."
200. LtCol Ronald J. Brown, "U.S. Marines in the Persian Gulf, 1990-1991: Marine Forces Afloat in Desert Shield and Desert Storm," draft, Section 9, pp. 5-14, hereafter Brown, "Marines Afloat in DS/DS."
201. Ibid.
202. I MEF ComdC Oct90, Sec 2.
203. MarCent Sitrep 079.
204. Ibid; 1st MarDiv ComdC Oct90, Sec 2; MWSS 174 ComdC Oct90, Sec 1; MWSS-373 ComdC, Sec 4; MWSS-374 ComdC, Sec 4.
205. Gen Colin L. Powell, USA (Ret), with Joseph E. Perisco, *My American Journey* (New York: Random House, 1995), p. 489, hereafter Powell, *My American Journey*.

206. DOD, *Final Report to Congress*, pp. 65-78.
207. 3d MAW Sitreps 090 and 094.
208. 3d MAW ComdC Dec90, Sec 2.
209. I MEF ComdC Nov90, Sec 2.
210. Biography of LtGen William M. Keys, USMC (Ret) (HQMC: PAO), 15Sep90.
211. Quilter, *With I MEF*, p. 35; I MEF ComdC Dec90, Sec 2.
212. Gen Charles C. Krulak, Taped comments on draft, given at the Navy-Marine Corps Historical Seminar, Washington Navy Yard, 18Mar97 (Oral HistColl, MCHC, Washington, D.C.), hereafter Krulak comments.
213. Krulak comments.
214. CG 2d FSSG ltr to CGIMEF, dtd 5Nov90.
215. Ibid.
216. Biography of LtGen Carl E. Mundy, Jr. (HQMC:PAO) 20Jul90.
217. BAT Tape 450; BAT Tape Krulak, Apr91.
218. BAT Tape 416.
219. Krulak comments.
220. NAVMC P-1005, *Officers on Active Duty in the Marine Corps*, 1Oct90.
221. BAT Tape 1454.
222. BAT Tape Krulak Apr91; BAT Tapes 416 and 450.
223. Ibid.; MarCent Sitrep 108; Krulak comments.
224. Brabham, "Training," p. 40.
225. BAT Tape 450.
226. BAT Tape 1454; 1st FSSG ComdC Nov90, Secs 2 and 3; Maj Gregory R. Caldwell, *An Analysis of United States Marine Corps Contracting Operations during Desert Shield and Desert Storm* (Monterey: NPGS, California, 1995), p. 33, hereafter, Caldwell, *Contracting Operations*.
227. 1st FSSG ComdC Dec90, Sec 3; BAT Tape 880.
228. Col Thomas E. Hampton, comments on draft, 2Mar97, Author's Files, hereafter Hampton comments.
229. BAT Tape 880.
230. 1st FSSG Sitrep 115.
231. DSG-1 ComdC Nov90, Sec 3.
232. BAT Tape 1454.
233. BAT Tape 316.
234. Ibid.; 1st MarDiv ComdC Nov90, Sec 2.
235. Kelly comments.
236. BAT Tape 28.
237. Kelly intvw, 9Dec90; Kelly comments.
238. Burke intvw, 9Dec90.
239. "Naval Construction Force Support," p. 16.
240. "Naval Construction Force Support," pp. 6 and 17.
241. Johnson comments.
242. Ibid., p. 18.
243. I MEF ComdC Dec90, Sec 2.
244. Simmons, "Getting Marines to the Gulf," p. 14.

245. BSSG-5 ComdC 1Jul-31Dec90, Encls 1 and 2.
246. 5th MEB ComdC 1July-31Dec90, Sec 2; Simmons, "Getting Marines to the Gulf," p. 20.
247. 1st MarDiv ComdC July-Dec90, Secs 1 and 2.
248. BAT Tape 5; Col Thomas S. Woodson and LtCol Robert L. Songer intvw, 19Mar96 (Oral HistColl, MCHC, Washington, D.C.), hereafter, Woodson and Songer intvw.
249. MarCent Sitreps 111-141; Simmons, "Getting to the Gulf," p. 19; I MEF ComdC Dec90, Sec 2.
250. BAT Tape 647.
251. MWSS-273 ComdC Jul-Dec90; 3d MAW Sitreps 118 and 119.
252. 3d MAW Logstat 075.
253. 3d MAW ComdC 3-30Sep90, Sec 1; 3d MAW ComdC Oct90, Sec 1, 3d MAW ComdC Dec90, Secs 1 and 2; 3d MAW Logstats 073 and 075; and 3d MAW Sitrep 118.
254. Skipper comments.
255. GSG-1 ComdC Dec90, Sec 3.
256. CG 1st FSSG, "Letter of Instruction For the Reception of 2d FSSG and Activation of the Direct Support Command," 14Dec90: BAT Tape 416; Woodson and Songer intvw.
257. 1st FSSG Sitrep 115.
258. Krulak, "A War of Logistics," p. 156.
259. BGen Charles C. Krulak, "CSS in the Desert," *Marine Corps Gazette*, Oct91, p. 22, hereafter Krulak, "CSS in the Desert."
260. Skipper comments.
261. Ibid. pp. 22-23; Woodson and Songer intvw.
262. Pankey comments.
263. 1st FSSG ComdC, Sec 2.
264. DSC ComdC 22Dec90-15Feb91, Secs 1 and 2; DSC SitReps 001 and 005; 1st FSSG ComdC, Secs 1 and 2.
265. DSG-2, "Desert Storm Historical Collection and Battlefield Assessment," 13Mar91 (MCHC, Washington, D.C.), hereafter DSG-2 Historical Collection.
266. Col David L. Wittle comments on draft, n.d. [Apr97], Author's Files, hereafter Wittle comments.
267. MCSSD-26, "Historical Collection and Battlefield Assessment Documents," 11 Mar 1991, (MCHC: Washington D.C.), hereafter MCSSD-26 Historical Collection; BAT Tapes 601 and 1390A.
268. Skipper comments.
269. 1st FSSG ComdC Secs 1 and 4; DSC ComdC 22Dec90-15Feb91, Sec 4; GSG-1 ComdC, Dec90, Sec 1; GSG-2 ComdC 12Dec90-10Mar91, Sec 1, hereafter, GSG-2 ComdC.
270. MarCent SitRep 140; 1st FSSG ComdC Dec90, Secs 2 and 3; DSC ComdC, 22Dec90-15Feb91, Secs 3 and 4; GSG-1 ComdC Dec90, Sec 3; "Naval Construction Force Support," pp. 2, 6, 17 and 18; GSG-2 ComdC, Secs 1, 2, and 3; MWSS-174 ComdC Dec90, Sec 2.
271. DoD, *Final Report to Congress*, p. 319.

272. MARCENT OpO, Change 2, 1Jan91, p. 5.
273. 1st FSSG ComdC Dec90-Feb91, Sec 2.
274. MWSSG-37 ComdC Jan90, Sec 2.
275. MWSS-373 ComdC Jan91, Sec 2.
276. MWSS-174 ComdC Jan91, Secs 2 and 3; 3d MAW ComdC Jan-Feb91, Sec 2.
277. Ibid.; MWSS-273 ComdC Jan91, Secs 2 and 3.
278. Col John A. O'Donovan comments on draft, n.d. [Mar97], Author's Files, hereafter O'Donovan comments.
279. Skipper comments.
280. Ibid.
281. DSC ComdC 22Dec90-15Feb91, Secs 1, 2, and 3; 1st FSSG ComdC Dec90-Feb 91, Sec 2.
282. 1st FSSG ComdC 1Dec90-28Feb91, Sec 2 and 3; GSG-1 ComdC Jan91.
283. BAT Tape 81.
284. "Naval Construction Force Support," pp. 7, 18, and 19.
285. DSG-1 ComdC Jan91, Secs 1 and 2; BAT Tape 316.
286. 7th Mar ComdC Jan-Feb91, Secs 2-3.
287. DSG-1 ComdC Jan91, Sec 2.
288. BAT Tapes 371 and 1393.
289. BAT Tape 1393.
290. Winter comments.
291. Kelly comments.
292. BAT Tape 1393.
293. 1st Mar ComdC Jan91, Secs 2 and 3.
294. BAT Tape 022.
295. BAT Tape 022.
296. Powell comments.
297. Burke comments.
298. BAT Tape 022.
299. Burke comments.
300. BAT Tape 371.
301. LtCol William Lucenta intvw, 19Apr96 (Oral HistColl, MCHC, Washington, D.C.), hereafter Lucenta intvw, 19Apr96.
302. DSG-1 ComdC 1-23Feb91, Sec 2.
303. BAT Tape 006.
304. BAT Tape 247.
305. BAT Tapes 247 and 371; Lucenta intvw, 19Apr96; Capt Kevin R. Wightman, comments on draft, hereafter Wightman comments.
306. BAT Tapes 1260, 247, 371, and 601; Kelly intvw, 9Dec90; LtCol Lucenta intvw, 19Apr96; Powell comments.
307. BAT Tape 006.
308. Ibid; BAT Tapes 371 and 247; Wightman comments.
309. BAT Tape 626; Kelly comments.
310. LtCol Carl D. Matter, comments on draft, 28Aug96, Author's Files.
311. DSG-2 Historical Collection; DSG-2 OpO 1-91, 14Jan91 (MCHC:

Washington, D.C.); BAT Tape 628.

312. DSC Sitrep 017.

313. MCSSD-26 Historical Collection; Bat Tape 601; Warker comments.

314. Ibid.; MCSSD-26 OpO 1-91 (Desert Storm), 28Jan91 (MCHC: Washington, D.C.).

315. DSG-2 Historical Collection (MCHC: Washington, D.C.); BAT Tape 5.

316. BAT Tape 5.

317. H. Norman Schwarzkopf, *It Doesn't Take a Hero*, (New York: Linda Grey Bantam Books, 1992), p. 414, hereafter, *It Doesn't Take a Hero*.

318. MWSS-373 ComdC Jan91, Sec 2.

319. MWSS-374 ComdC Jan91, Secs 2 and 3.

320. 3d MAW ComdC Jan-Feb91, Sec 1; MWSSG-37 ComdC Jan91, Sec 2; GSG-1 ComdC Jan91, Sec 2.

321. "Naval Construction Force Support," p.19.

322. MWSS-271 ComdC Jan-Jun91, Secs 2 and 3.

323. Woodson and Songer intvw, 19Mar96.

324. 1st FSSG ComdC Dec90-Feb91, Secs 2 and 3; GSG-1 ComdC Jan 91, Secs 2 and 3; BAT Tape 81.

325. GSG-2 ComdC 12Dec90-10Mar91, Secs 2 and 3.

326. Hampton comments; Skipper comments.

327. GSG-1 ComdC Jan91, Secs 2 and 3; 1st FSSG ComdC Dec90-Jan91, Secs 2 and 3.

328. BAT Tape 301.

329. "Naval Construction Force Support," p. 7; 1st FSSG ComdC Dec90-Feb91, Secs 2 and 3.

330. BAT Tape 301.

331. DSC ComdC 22Dec90-15Feb91, Sec 3.

332. LtCol John A. O'Donovan, "Combat Service Support During Desert Shield and Desert Storm: From Kibrit to Kanjar," *Marine Corps Gazette*, Oct91, pp. 26-31, p. 29, hereafter. O'Donovan, "From Kibrit to Kanjar."

333. Skipper comments.

334. Ibid.

335. 2dMarDiv ComdC 1Jan-13Apr91, Secs 2 and 3.

336. DSG-2 Historical Collection; DSC Sitrep 023.

337. Co C, 2dMed Bn CmdC 1Jan-7Mar91, Encl 1.

338. 8th Motor Transport Battalion Dispatch Log, 23-31 Jan91, (MCHC: Washington, D.C.), hereafter "8thMotors Dispatch Log."

339. BAT Tape 626; DSG-2 "Combat Service Support User's Guide," n.d., DSG-2 Historical Collection; DSG-2 OpO 3-91.

340. DSG-2 Historical Document; Col Thomas P. Donnelly, Jr. comments on draft, n.d. [Feb97], hereafter Donnelly comments.

341. BAT Tape 601.

342. 10thMar ComdC Feb91, Sec 2.

343. DSG-2 Historical Collection.

344. DSG-2 Historical Collection; 10th Marines ComdC Feb91, Sec 2.

345. BAT Tape 1081.

346. I MEF ComdC Jan-Feb91, Sec 2; 2d MarDiv ComdC, Jan-Feb91, Sec 1.
347. DSG-2 Historical Collection; BAT Tape 629.
348. "Action of the 1st (Tiger) Brigade, 2d Armored Division, during Operation Desert Shield and Desert Storm: 10Aug91-1Mar91," hereafter "Tiger ComdC."
349. 6thMar ComdC Jan-Feb91, Sec 2.
350. MCSSD-26 Historical Collection.
351. BAT Tape 601.
352. Ibid.
353. MCSSD-26 Historical Collection.
354. BAT Tape 601.
355. Warker comments.
356. Col James Head W. Head, comments on draft, 20Feb97, Author's Files, hereafter Head comments.
357. 8th Marines ComdC Jan91, Secs 1, 2, and 3.
358. DSG-1 FragO 01 to OpO 2-90, 25Jan91.
359. BAT Tape 1393.
360. 3dMar ComdC Jan-Feb91, Secs 2 and 3; Powell comments.
361. DSG-1 ComdC Jan 91.
362. TF Taro FragO 6-91, 4Feb91, Annex D; Maj William H. Ritchie, comments on draft, 4Feb97, Author's File, hereafter Ritchie comments.
363. BAT Tape 1393.
364. BAT Tape 371; Ritchie comments.
365. Kelly comments.
366. BAT Tape 371.
367. BAT Tape 247.
368. DSC ComdC 22Dec90-15Feb91, Sec 3.
369. BAT Tape 1393.
370. BAT Tape 1393; 8th Motors dispatch log, 27-30 Jan91.
371. Trainor and Gordon, *War of the Generals*, p. 268.
372. Ibid., pp. 268-271.
373. Woodson and Songer intvw, 19Mar96.
374. BAT Tape 137.
375. Trainor, *War of the Generals*, p. 276; Krulak, "A War of Logistics," 157.
376. Woodson Intvw, 19Mar96; Woodson comments.
377. BAT Tape 371.
378. BAT Tapes 247 and 1393.
379. Kelly telecon, 13Jan96; Kelly comments.
380. BAT Tape 1393.
381. Cureton, *With the 1st Marine Division*, p. 43.
382. 3d Marines ComdC Jan-Feb91, Sec 2.
383. BAT Tape 1393.
384. Cureton, *With the 1st Marine Division*, p. 45, 3d Marines ComdC Jan-Feb91, Sec 2.
385. BAT Tape 1393.
386. Cureton, *With the 1st Marine Division*, p. 45; 3d Marines ComdC Jan-Feb91, Sec 2.



387. BAT Tape 1393.
388. 2d MarDiv ComdC 1Jan-18 Apr91, Sec 2.
389. 6th Mar ComdC Jan-Feb91, Secs 2 and 3.
390. Warker comments.
391. MCSSD-26 Historical Collection.
392. 7th Mar ComdC Jan-Feb91, Sec 2.
393. Winter comments.
394. BAT Tape 371; 4th Mar ComdC Jan-Feb91, Secs 2 and 3.
395. 4th Mar ComdC Jan-Feb91, Secs 2 and 3.
396. 1st MarDiv ComdC, Jan-Feb91, Sec 2.
397. Skipper comments; Maj Stephen H Negahquet, E-Mail comments on draft, 18Apr97 Author's Files; WO Michael R. Glass, E-Mail comments on draft, 21Apr97, Author's Files.
398. DSC ComdC 22Dec-15Feb, Sec 3.
399. 1st Marines ComdC Feb91, Sec 2.
400. BAT Tape 022.
401. Col Richard Kelly intvw, 10Apr96 (Oral HistColl, MCHC, Washington, D.C.), hereafter Kelly intvw, 10Apr96; 1st MarDiv ComdC Jan-Feb91; 5thBn, 11thMar COC journal, 2Feb91.
402. BAT Tape 317.
403. Winter comments.
404. Coop comments; MWSG-37 ComdC Feb91, Sec 3.
405. MWSG-37 ComdC Feb91, Sec 3; 1st FSSG ComdC Dec90-Feb91, Sec 3; GSG-2 ComdC 12Dec90-10Mar91, Sec 1.
406. MWSG-37 ComdC Feb91, Sec 1.
407. Krulak, "CSS in the Desert," pp. 22-23 and "A War of Logistics," p. 158.
408. Krulak, "CSS in the Desert," p. 23.
409. Woodson and Songer intvw, 19Mar96.
410. Hans Weher, *A Dictionary of Modern Standard Arabic* (Ithaca: Spoken Language Services 1976), p. 263.
411. Krulak, "CSS in the Desert," p. 24.
412. Krulak, "CSS in the Desert," pp. 23-24; "A War of Logistics," p. 158; Woodson and Songer intvw, 19Mar96.
413. Skipper comments.
414. BAT Tape 642; Krulak, "CSS in the Desert," pp. 24-25; DSC ComdC 22Dec-15Feb91, Secs 2 and 3; Skipper comments.
415. Quilter, *With I MEF*, p. 59 and "Naval Construction Battalion Support," pp. 7 and 20.
416. Quilter, *With I MEF*, p. 59; DSC ComdC 16Feb-13Mar91, Sec 2; GSG-2 ComdC 12Dec90-10Mar91, Sec 2.
417. Coop comments; 1stMarDiv ComdC Jan-Feb91, Sec 2.
418. MWSG-37 ComdC Feb91, Sec 3; BAT Tape 647; "Naval Construction Battalion Support," p. 20.
419. "Naval Construction Battalion Support," pp. 20-21.
420. Krulak comments.
421. 8th Motors Dispatch Log 9-24Feb91; Woodson and Songer intvw, 19Mar96.

- 422. Krulak, "CSS in the Desert," p. 25.
- 423. BAT Tape 81.
- 424. O'Donovan, "From Kibrit to Khanjar," p. 31; 1st FSSG ComdC, Secs 2 and 3; LtCol Felix M. Bush comments.
- 425. BAT Tape 263.
- 426. GSG-2 ComdC 12Dec-10Mar91, Sec 2; BAT Tape 052.
- 427. GSG-2 ComdC 12Dec90-10Mar91, Sec 2; 1st FSSG ComdC Dec90-Feb91, Sec 2.
- 428. Skipper comments.
- 429. O'Donovan, "From Kibrit to Kuwait," p. 29; DSC ComdC 16Feb-13Mar91, Sec 2.
- 430. GSG-2 ComdC 12Dec90-10Mar91, Secs 2 and 3.
- 431. Ibid., Secs 1 and 3; 1stFSSG ComdC Dec90-Feb91, Secs 1 and 3.
- 432. "Naval Construction Battalion Support," p. 20.
- 433. 2dMarDiv ComdC 1Jan-18Apr91, Sec II.
- 434. Skipper comments.
- 435. 6th Mar ComdC Jan-Feb91, Secs II and III.
- 436. Wittle comments.
- 437. BAT Tape 601; 6th Mar ComdC Jan-Feb90, Sec. II.
- 438. MCSSD-26 Historical Collection.
- 439. 6th Mar ComdC Jan-Feb91, Sec 2; BAT Tape 601.
- 440. Head comments.
- 441. MCSSD-28 Historical Collection.
- 442. BAT Tape 626; Col O'Donovan comments.
- 443. Donnelly comments.
- 444. 2dBn, 10th Marines ComdC Feb91, Sec 2; 2d Bn 12th Mar ComdC Feb91, Sec 2; Warker comments.
- 445. Tiger Command Chronology.
- 446. 8th Motor Transport Battalion Daily Run Log; Woodson comments.
- 447. 6th Mar ComdC Jan-Feb91, Sec III.
- 448. MCSSD-26 Historical Collection.
- 449. Donnelly comments.
- 450. DSG-2 Historical Collection.
- 451. 8th Mar ComdC Feb91, Sec 2; MCSSD-28 Historical Collection.
- 452. Krulak, "A War of Logistics," p. 159.
- 453. Krulak, "CSS in the Desert"; O'Donovan, "From Kibrit to Khanjar"; DSC ComdC 16Feb-13Mar91.
- 454. Krulak, "CSS in the Desert"; O'Donovan, "From Kibrit to Khanjar"; DSC ComdC 16Feb-13Mar91.
- 455. DSG-2 CSS Users Guide.
- 456. 8th Motors Daily Run Logs, 18-23 Feb91.
- 457. 8th Motors Dispatch Logs.
- 458. DSC ComdC 16Feb-13Mar91, Secs 2 and 3.
- 459. Cureton, *With the 2d MarDiv*, p 38; Skipper comments.
- 460. Capt Antonio Colmenares, comments on draft, n.d. [1996-97], Author's Files, hereafter Colmenares comments; Company C, 2d Med Bn ComdC 1Jan-

- 7Mar91, Encl 1; DSG-2 FragO 7-91 (Draft) and OpO 2-91, 21Feb91, (MCHC, Washington, D.C.).
461. BAT Tape 628; DSG-2 Frag Order 7-91; LtCol Arthur H. Sass comments on draft.
462. BAT Tape 601; Warker comments.
463. BAT Tape 601; MCSSD-26 Historical Collection.
464. MCSSD-26 Historical Collection.
465. 6th Mar ComdC Jan-Feb91, Sec 2; 1stBn, 6thMar ComdC Jan-Feb91, Sec 2.
466. MCSSD-28 Historical Collection; Head comments.
467. 3d Mar ComdC Feb91, Sec 2.
468. BAT Tapes 316 and 1393; Ritchie comments.
469. BAT Tape 247.
470. DSG-1 ComdC 1-23Feb91, Sec 2.
471. DSG-1 ComdC 1-23 Feb91, Sec 2.
472. Kelly intvw, 10Apr96; BAT Tape 371,
473. Powell comments.
474. BAT Tape 247.
475. BAT Tape 316.
476. Powell comments.
477. DSG-1 ComdC 1-23Feb91, Sec 2; Bat Tape 371.
478. Lucenta intvw, 19Apr96.
479. Kelly comments.
480. BAT Tape 247.
481. Kelly intvw, 10Apr96.
482. Ibid.
483. Kelly comments.
484. CSSD-10 ComdC 23-28Feb91; BAT Tape 247.
485. BAT Tape 1393.
486. Ritchie comments.
487. BAT Tapes 28 and 050.
488. 1stBn, 7th Mar ComdC, Tabs G and K.
489. Winter comments.
490. CSSD-11 Battle Summary of Action, 13 Mar91.
491. 1st FSSG ComdC Dec90-Feb91, Sec 3.
492. BAT Tape 302.
493. Seabee History.
494. MWSS-271 ComdC Jan-Jun91, Secs 2 and 3; CSSD-10 ComdC 23-28 Feb91; Kelly comments.
495. MWSSG-37 ComdC Feb91, Sec 3.
496. DoD, *Final Report to Congress*, p. 265.
497. 2d CEB ComdC Feb91, Sec 2; Skipper comments.
498. Silver Star citation for SSgt Daniel A. Kur.
499. BAT Tape 601; MCSSD-26 Historical Documents.
500. Ibid., MCSSD-26 Sitrep 24Feb-1Mar91, hereafter MCSSD-26 Sitrep.
501. Co C, 2d Med Bn ComdC 1Jan-7Mar91, Encl 1; 10th Mar ComdC Feb91, Sec 2.

- 502. DSG-2 Historical Collection.
- 503. DSC Sitrep 058.
- 504. 8th Motors Dispatch Log for 24 Feb91; Colmenares comments.
- 505. MCSSD-28, "Historical Collection and Battlefield Assessment Documents," MCHC, Washington, D.C., Encl 8, Chronological Narrative, 12Mar91, hereafter MCSSD-28 Chronological Narrative.
- 506. 8th Mar ComdC Feb91, Sec 2; MCSSD-28 Chronological Narrative.
- 507. MCSSD-28 Chronological Narrative.
- 508. Skipper comments.
- 509. 1st Bn, 7th Marines ComdC, 1Jan-28Feb91, Sec 2; DSG-1 Summary of Action 24-28 Feb.
- 510. Winter comments.
- 511. Ibid.
- 512. Det, 1st CEB, ComdC 24-28 Feb91; 1st CEB ComdC Jan-Feb91, Sec 2.
- 513. DSC ComdC 16Feb-13Mar9, Sec 3.
- 514. CSSD-11, Battle Summary of Action, 13 Mar91; DSG-1, Summary of Action 24-28 Feb91.
- 515. CSSD-17, Summary of Action, 24-28Feb91.
- 516. Kelly intvw, 10Apr96; Lucenta intvw, 19Apr96.
- 517. Powell comments.
- 518. CSSD-11, Battle Summary of Action, 13 Mar91; DSG-1, Summary of Action, 24-28 Feb91.
- 519. 1st Bn, 25th Mar ComdC Jan-Feb91, Sec 2.
- 520. DSG-1, Summary of Action, 24-28Feb91.
- 521. MWSS-271 ComdC, Feb91; CSSD-10 ComdC, 23-28Feb91.
- 522. DSG-1, Summary of Action, 24-28Feb91.
- 523. DoD, *Final Report to Congress*, pp. 273-4.
- 524. BAT Tape 601.
- 525. BAT Tape 1390A.
- 526. BAT Tape 601.
- 527. BAT Tape 601; MCSSD-26 Historical Collection.
- 528. 8th Mar ComdC Feb91, Sec 2.
- 529. BAT Tape 628.
- 530. MCSSD-28 Chronological Narrative.
- 531. Silver Star citation for SSgt Daniel A. Kur.
- 532. BAT Tape 642.
- 533. Winter comments.
- 534. 1st Bn, 7th Mar ComdC, 1Jan-28Feb91, Tab K.
- 535. DSG-1, Summary of Action, 24-28Feb91.
- 536. 1st Mar ComdC Feb91, Sec 3.
- 537. Burke comments.
- 538. BAT Tapes 1395 and 37; Kelly intvw, 10 Apr1996; Kelly comments; Ritchie comments.
- 539. CSSD-11, Battle Summary of Action, 13 Mar91 and DSG-1, Summary of Action, 24-28 Feb91.

- 540. CSSD-10 ComdC, 23-28Feb91; Kelly intvw, 10Apr96; Lucenta intvw, 10Apr96.
- 541. BAT Tape 1393, DSG-1, Summary of Action, 24-28Feb91.
- 542. Det, 1st CEB ComdC 24-28Feb91.
- 543. DSC ComdC, 16Feb-12Mar91, Sec 3.
- 544. DoD, *Final Report to Congress*, p. 282.
- 545. Warker comments
- 546. MCSSD-28 Historical Collection.
- 547. BAT Tape 628; Colmenares comments.
- 548. 8th Mar ComdC, Sec 2; MCSSD-28 Chronological Narrative.
- 549. MCSSD-28 Chronological Narrative.
- 550. 8th Mar ComdC, Feb91, Sec 3; MCSSD-28 Chronological Narrative.
- 551. Tiger Brigade Chronology.
- 552. 8th Motors Dispatch Log 26Feb91.
- 553. DSC SitRep 060.
- 554. Skipper comments.
- 555. Kelly comments.
- 556. DSG-1, Summary of Action, 24-28Feb91; Burke comments.
- 557. CSSD-17, Summary of Action, 24-28Feb91; Winter comments.
- 558. CSSD-11, Battle Summary of Action, 13 Mar91; DSG-1, Summary of Action for 24-28 Feb91.
- 559. EngDet 1st CEB, ComdC, 24-28 Feb91; Cureton, *With the 1stMarDiv*, p. 115; 1st CEB ComdC, Jan-Feb91, Sec 2.
- 560. BAT Tape 371.
- 561. DSG-1, Summary of Action, 24-28Feb91.
- 562. Kelly intvw, 10Apr96; Lucenta intvw, 19Apr96.
- 563. CSSD-10 ComdC 23-28Feb91.
- 564. Skipper comments.
- 565. "Naval Construction Force Support," p. 21.
- 566. BAT Tape 1454.
- 567. O'Donovan comments.
- 568. 1st FSSG ComdC Dec90-Feb91, Sec 2; Woodson Intvw, 19Mar96; Woodson comments.
- 569. BAT Tape 302.
- 570. DoD, *Final Report to Congress*, p. 289.
- 571. MCSSD-28 Chronological Narrative.
- 572. DSG-2 Historical Collection.
- 573. Co C, 2d Med Bn, ComdC 1Jan-7Mar 91, Encl 1.
- 574. DSG-2 Historical Collection.
- 575. O'Donovan comments; Skipper comments.
- 576. BAT Tape 642; Skipper comments.
- 577. DSG-1, Summary of Action, 24-28Feb91; CSSD-17, Summary of Action, 24-28Feb91.
- 578. DSG-1, Summary of Action, 24-28Feb91.
- 579. CSSD-11, Battle Summary of Action, 13 Mar91; DSG-1, Summary of Action for 24-28 Feb91.

- 580. BAT Tape 1393; CSSD-10 ComdC 23-28Feb91.
- 581. CSSD-11, Battle Summary of Action, 13 Mar91; DSG-1, Summary of Action for 24-28 Feb91.
- 582. Woodson and Songer intvw, 19Mar91; Woodson comments.
- 583. DoD, *Final Report to Congress*, p. 292.
- 584. CSSD-10 ComdC 23-28Feb91; Kelly comments.
- 585. BAT Tape 1393.
- 586. CSSD-11, Battle Summary of Action, 13 Mar91; DSG-1, Summary of Action 24-28 Feb91.
- 587. DSC SitRep 062.
- 588. MCSSD-26 SitRep.
- 589. Warker comments.
- 590. Quilter, *With I MEF*, pp. 90-91.
- 591. BSSG-5 ComdC Jan-Mar91, Sec 3.
- 592. BSSG-5 ComdC Jan-Mar91, Sec 3; Quilter, *With I MEF*, p. 100.
- 593. BSSG-5 ComdC Jan-Mar91, Sec 3.
- 594. DoD, *Final Report to Congress*, p. 393.
- 595. *It Doesn't Take A Hero*, p. 490.
- 596. BSSG-5 ComdC Jan-Mar91, Secs 2 and 3.
- 597. Quilter, *With I MEF*, p. 109.
- 598. Kelly intvw, 10Apr96; Lucenta intvw, 19Apr96.
- 599. CSSD-11, Battle Summary of Action, 13 Mar91.
- 600. DSG-1 ComdC 1-15Mar91, Secs 2 and 3.
- 601. Kelly Intvw, 10Apr96.
- 602. GSG-2 ComdC 12Dec90-10May91, Secs 2 and 3.
- 603. CWO-5 Thomas M. Sturtevant comments on draft.
- 604. Skipper comments.
- 605. BAT Tape 628.
- 606. DSG-2 Historical Collection.
- 607. DSG-2 SitRep 066.
- 608. MCSSD-26 Sitrep 29Mar-2Apr91; MCSSD-26 Historical Collection.
- 609. "Naval Construction Force Support," pp. 21-23.
- 610. MWSS-271 ComdC Jan-Jun91, Sec 2.
- 611. MWSS-374 Air Unit File, MCHC, Washington, D.C., pp. 8-9.
- 612. MWSS-273 ComdC Jan-Jun91 Sec 1,2, and 3.
- 613. MWSS-373 ComdCs Mar91 and Apr-Jun91, Secs 2 and 3; MSgt David F. Tuche USMC, MWSS-373 Historian, 5 Dec 96.
- 614. MWSS 271 ComdC Jan-Jun91, Secs 2 and 3.
- 615. MWSS-174 ComdC 1Apr-30Jun91, Sec 2and 3.
- 616. Krulak comments.
- 617. O'Donovan comments.
- 618. Woodson and Songer Intvw, 19Mar96.
- 619. Skipper comments.
- 620. Biography of BGen Paul M Lee, Jr. (HQMC: PAO, 1995).
- 621. CSSE MARFOR SWA ComdC 18-31May91, Secs 1-3.
- 622. MWSS-273 ComdC Jan-Jun91 Sec 1,2, and 3.

- 623. ACE MARFORSWA ComdC 1June-10Oct91.
- 624. "Naval Construction Battalion Support," pp. 8, 9, and 23.
- 625. Skipper comments.
- 626. Ibid.
- 627. MARFORSWA ComdC Secs 2 and 3; Woodson Intvw, 19Mar96.
- 628. CSSE Special Purpose MAGTF ComdCs, June, July, Aug, 1Sep-10Oct91, Sec 1,2, and 3; Author telecon with CWO-3 Jerry L. Mazza USMC(Ret), 7Oct96.
- 629. CSSE Special Purpose MAGTF ComdCs June, July, Aug, 1Sep-10Oct91, Secs 1,2, 3.
- 630. ACE MARFORSWA ComdC 1June-10Oct91.
- 631. Security Det, 3d Mar ComdC, 23Apr-10Oct91, Sec 1, 2, and 3.
- 632. MARFORSWA ComdC, 21 Apr-10Oct91, Secs 2 and 3; CSSE MARFOR-SWA ComdC 1Sep-10Oct91, Sec 3.
- 633. Krulak, "CSS in the Desert," p. 25.

# Appendix A

## CSS Command Relationships

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*Copy of concept paper prepared by Col John A. Woodhead III,  
Chief of Staff, 2d FSSG, in November 1990*

There are several variations to command relationships that could be applied to FSSGs in the Persian Gulf:

1. The Vietnam “solution,” whereby one FSSG would be OPCON to the other, thereby forming a very large command similar to the force logistics command of that time frame. Unfortunately, the result would be the same—a monolith, unresponsive to either the ACE or GCE, and, by necessity, controlled by MARCENT.

2. The assignment of zones of action where each FSSG would support the MSCs in its zone. One of the FSSGs would have control of the IFASC and all automated systems, while both would be competitors in the theater logistics structure.

3. Another option would have an FSSG headquarters afloat with the 4th and 5th MEBs. This option would not be the most effective use of the C3 inherent in the FSSG headquarters. The BSSGs with 4th and 5th MEBs are relatively small and the concept of operations already detailed for use if the MEBs are committed has their support coming from the FSSG in country. If an FSSG headquarters were needed for an amphibious operation, a small staff from either FSSG could move aboard ship prior to the operation and provide the recurring C3 for the two BSSGs. It should be noted that under current ships loading, there is no room for even a “suitcase” FSSG headquarters.

4. The assignment of FSSGs by mission. One FSSG would be assigned the mission of direct support of the ground combat elements while the other would be assigned the general support mission for MARCENT and a reinforcing mission to the other FSSG. (This FSSG could also provide the CSSDs for the ACE and run the port.) In applying this variation, one of the FSSGs could replace the other’s elements either in the current Division’s area or in the port area. (one FSSG become the direct support group and the other become the general support group). This variation might have a negative impact on support for a short period of time but would be the strongest and most responsive over the long run. A variation of this concept that would ease any impact might be to do the following:

Take advantage of the inherent task organization capability of the FSSG. Based upon what (was in the Gulf region) and what 2d FSSG



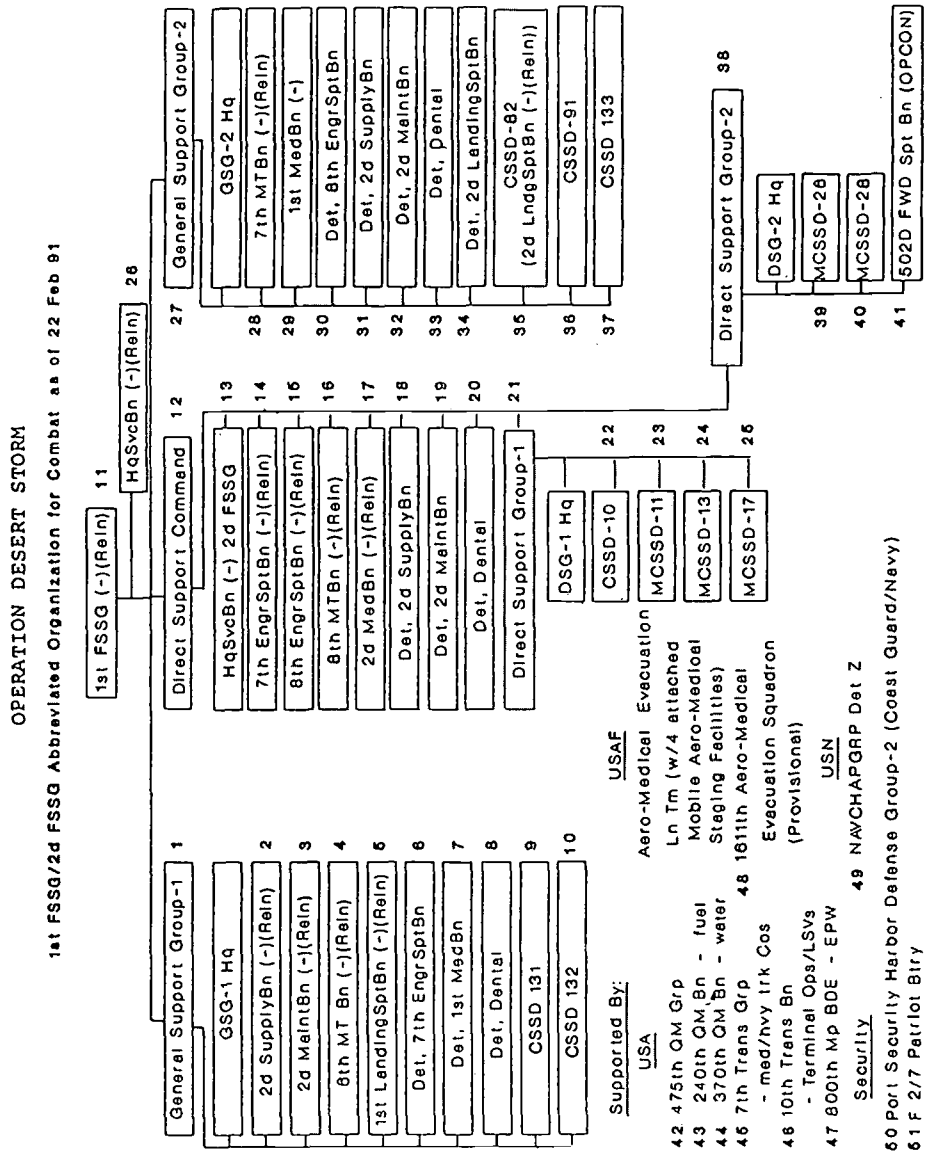
would deploy with, the available C3 would be as follows—nine Battalion Hqs, three BSSG nucleus headquarters, and an MSSG nucleus headquarters. Each FSSG will have its own Headquarters and Service Battalion to provide C3 for the Group. If the four battalions (Supply, Maintenance, Medical, and Dental) which have general support functions, along with appropriately sized detachments of the other battalions were “chopped” to the general support/reinforcing FSSG, it would have the total C3 required to accomplish its mission. Similarly, the Engineer, Motor Transport, Landing Support Battalions and the CSSE nucleus headquarters, and appropriately sized detachments could be “chopped” to the direct support FSSG supporting the GCEs. This approach would give each FSSG a clear mission with clearly defined responsibilities. The GS/Rein FSSG would accumulate and push forward the supplies and run the port while the DS FSSG would provide the direct support to the two Divisions, through direct support CSSDs that possess the necessary C3 required for offensive operations. This approach is not new! This approach is the method that is used to support back-to-back CAX’s where the CSSE is a composite from both 1st and 2d FSSGs.

The bottom line is that the Marine Corps will have approximately two complete MEFs committed to (the Gulf) and any attempt to support that large a force with one FSSG is doomed to failure. In the type of maneuver warfare that we may very well conduct, C3 is as important to the CSSE as it is to the GCE or ACE. Unfortunately, that C3 does not exist in (the Gulf) now and certainly not in the quantity necessary to support two MEF’s. By bringing in 2d FSSG and employing them in variation #3, you can form the type of responsive CSS structure that will be effective in both the defense and offense.

# Appendix B

## 1st FSSG/2d FSSG Organizational Chart

### Operation Desert Storm, 22 Feb 1991



## Appendix C

### Command and Staff List

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#### Building Blocks of 1st Force Service Support Group (Aug-Sep90)

Brigade Service Support Group 7	Col Alexander W. Powell
Combat Service Support Detachment 71	Capt Guido G. Aidenbaum
	Maj Allen Coulter
Combat Service Support Detachment 72	Capt Kerry K. Feldman
Combat Service Support Detachment 73	Capt Adrian W. Burke
Brigade Service Support Group 5	LtCol Ernest G. Beinhart III
Combat Service Support Detachment 31	Maj Thomas J. Nielsen

#### 1st Force Service Support Group (Sep90-Apr91) BGen James A. Brabham, Jr.

Headquarters Support Group/Battalion	LtCol Henry T. Hayden
Direct Support Command (Dec90-Mar91)	BGen Charles C. Krulak
Headquarters and Service Battalion	LtCol James E. Vesely
2d Medical Battalion	LCdr William G. Brown, USN
7th Engineer Support Battalion	LtCol David L. John
8th Engineer Support Battalion	LtCol Charles O. Skipper
8th Motor Transport Battalion	LtCol Thomas S. Woodson
Detachment 2d Supply Battalion	Maj Joseph F. Tracey
Detachment 2d Maintenance Battalion	Capt Benjamin R. Braden
Detachment 2d Landing Support Battalion	Capt Paul R. Yorio
Direct Support Group 1	Col Alexander W. Powell
Combat Service Support	
Detachments 111/10	LtCol Richard L. Kelly
Combat Service Support Detachment 141/	
Mobil Combat Service Support Detachment	Capt Adrian W. Burke
Combat Service Support Detachment 13	Capt William H. Ritchie III
Mobile Combat Service Support Detachment 17	Capt Edward J. Winter
Combat Service Support Detachment 142*	Capt Nello E. Dachman
Direct Support Group 2	Col Thomas P. Donnelly, Jr.
Mobile Combat Service Support Detachment 26	LtCol David L. Wittle
Mobile Combat Service Support Detachment 28	LtCol James W. Head

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\*CSSD-142 redesignated as Ammunition Company, 2d Supply Battalion, GSG-1 in Dec 1990.

General Support Group 1	Col Thomas E. Hampton
2d Maintenance Battalion	Col Paul A. Pankey
2d Supply Battalion	Col Marlin D. Hilton
6th Motor Transport Battalion	LtCol Grant M. Sparks
1st Landing Support Battalion	LtCol Larry D. Walters
Detachment, 7th Engineer Battalion	Maj Michael W. LaVigne
Detachment, 1st Medical Battalion	Maj Jerry W. Datzman
Dental Detachment	LCdr Jackie H. Parks, USN
Combat Service Support Detachment 131	Capt Robert A. Brunhofer, USN
	Maj Allen Coulter
	Capt Ritchie L. Rodebaugh
Combat Service Support Detachment 132	Capt Guido G. Aidenbaum
	Capt Tom D. Barna
General Support Group 2 (Dec90-Mar91)	Col Thomas E. Hampton
Headquarters and Service Detachment	Maj James A. V. Hart
7th Motor Transport Battalion	
2d Landing Support Battalion	LtCol David B. Kirkwood
1st Medical Battalion	Cdr Gary C. Breeden, USN
Maintenance Detachment	Capt John M. Carter
Engineer Detachment	CW03 Clement Adams
	Capt John D. Hochstetler
Supply Detachment	Capt John G. Hergert
Combat Service Support Detachment 82	LtCol David B. Kirkwood
Combat Service Support Detachment 91	LtCol Linden L. Sparrow
Combat Service Support Detachment 133	Capt Eric R. Junger

#### Marine Wing Support Group 37

(Dec90-Apr91)

Col Robert W. Coop

Marine Wing Support Squadron 174	LtCol James P. Chessum
Marine Wing Support Squadron 271	LtCol Richard H. Zegar
Marine Wing Support Squadron 273	LtCol William L. Riznychok
Marine Wing Support Squadron 373	LtCol Stephen D. Hanson
Marine Wing Support Squadron 374	LtCol Stephen G. Hornberger
	LtCol Brian E. Dyck

#### Commander Mobil Construction Battalions Forward

3d Naval Construction Regiment

(Aug90-Mar91)

Capt Michael R. Johnson, USN

Naval Mobil Construction Battalion 4*	Cdr James T. Corbett, USN
Naval Mobil Construction Battalion 5	Cdr David F. Walsh, USN

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\*NMCB-4 departed Southwest Asia in December 1990 and did not participate in Desert Storm.

Naval Mobil Construction Battalion 7\*  
Naval Mobil Construction Battalion 24  
Naval Mobil Construction Battalion 40  
Naval Mobil Construction Battalion 74

Cdr Gary M. Craft, USN  
Cdr James McGarrah, USN  
Cdr John R. Doyle, USN  
Cdr William P. Fogarty, USN

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\*NMCB-7 departed Southwest Asia in December 1990 and did not participate in Desert Storm.

## Appendix D

### List of Abbreviations and Glossary

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A6-E Intruder, Grumman—A two-seat all-weather bomber featuring five weapon attachments points, each with a 3,600-pound capacity. Typical weapon loads include: 28 500-pound bombs in clusters of six or three 2,000-pound general purpose bombs. The Intruder has a cruising speed of 412 knots.

AAVs—Amphibious Assault Vehicles. AAVP7A1 (Personal), AAVC7A1 (Communications), AAVR7A1 (Recovery)

ACE—Aviation Command Element

ACR—Armored Cavalry Regiment

AH-1W Super Cobra, Bell Helicopter Textron—Two-crew attack helicopter with a cruising speed of 147 knots. Armaments include a 20mm turreted cannon, four external wing stations firing TOW/Hellfire (point target/antiarmor) missiles, and Sidewinder (antiair) and Sidearm (antiradar) missiles. During Operation Desert Storm these helicopters destroyed 97 tanks, 104 armored personnel carriers and vehicles, 16 bunkers, and 2 antiaircraft artillery sites without the loss of any aircraft.

AMALs—Authorized Medical Allowance Lists

ARCent—U.S. Army Component of U.S. Central Command

AV-8B Harrier, McDonnell Douglas—Single-seat aircraft providing a capability to attack and destroy surface and air targets, escort helicopters, conduct close and deep air support, and provide combat air patrols. Cruise speed ranges from subsonic to transonic.

BGen—Brigadier General

BSSG—Brigade Service Support Group

C-130 Hercules, Lockheed—Four-turboprop, medium-lift tactical transport airplane. The C-130 provides in-flight refueling, aerial delivery of troops and cargo, emergency resupply, an airborne Direct Air Support Center, and additional support.

CAAT—Combined Anti-Armor Teams

CAX—Combined Area Exercises

CEC—Civil Engineer Corps

CH-46E Sea Knight, Boeing Vertol—Medium-lift, tandem rotor, twin-engine, two-pilot transport helicopter capable of carrying 25 troops or 4.5 tons over a 50-mile radius, known to Marines as a “Frog.”

CH-47 Chinook, Boeing Vertol—A heavy-lift helicopter used by the U.S. Army and allied forces, commonly called a “Hook.”

CH-53D Sea Stallion, Sikorsky—Medium-lift helicopter used in transporting equipment and supplies during the ship-to-shore movement of an amphibious assault and subsequent operations ashore. A three-crew member aircraft capable of 130 knots and operations in adverse weather conditions.

CH-53E Super Sea Stallion, Sikorsky—Heavy-lift, single-main-rotor, triple-engine, two-pilot cargo helicopter capable of lifting 55 troops or 16 tons, with aerial refueling capability, also called an “Echo.”

CinC—Commander-in-Chief

ComCBPac—Commander, Naval Construction Battalions Pacific Fleet

CSSA—Combat Service Support Area

CSSD—Combat Service Support Detachment

CSSOC—Combat Service Support Operations Center

CUVC—Commercial Utility Cargo Vehicle

DMAC—Division Mechanized Assault Course

DSC—Direct Support Command

DSG—Direct Support Group

EA6B Prowler, Grumman—Airborne Command and Control (C2W) support to Fleet Marine Forces to include electronic attack (EA), tactical electronic support (ES), electronic protection (EP), and high speed antiradiation missiles (HARM). Maximum speed reaches .99 mach, with a cruising speed of .72 mach.

EOD—Explosive Ordnance Disposal

EPWs—Enemy Prisoners of War

FA-18 Hornet, McDonnell Douglas—Single-seat fighter/bomber exceeds speeds of mach 1.8. Armaments include air-to-air missiles, air-to-ground bombs, and a M61 20mm six-barrel gun.

FARP—Forward Arming and Refueling Point

FASP—Forward Ammunition Storage Point

FOB—Forward Operating Base

FROGs—Free-Rockets-Over-the-Ground

FSSG—Force Service Support Group

GPS—Global Positioning System. A satellite navigation system providing highly accurate, continuous three-dimensional positioning for a using unit.

GSG—General Support Group

HEAT—High Explosive Anti-Tank Round

HMH—Marine Heavy Helicopter Squadron

HMLA—Marine Light Attack Helicopter Squadron

HMM—Marine Medium Helicopter Squadron

HMMWV—High-Mobility Multi-Purpose Wheeled Vehicle. These vehicles carry troops and light cargo, and can be armed with TOW missiles or machine guns.

H&SG—Headquarters and Support Group

HST—Helicopter Support Team

IFASC—Interim Forward Automated Services Center

JFC-E—Joint Forces Command East

KC-130, Lockheed—The aerial refueller version of the Lockheed Hercules C-130.

LAI—Light Armored Infantry

LAAWs—Light Anti-Armor Weapon

LAVs—Light Armored Vehicles. LAV-AT (Anti-Tank), LAV-25 (25mm Chain



Gun), LAV-L (Logistics), LAV-M (Mortar), LAV-CC (Communications), LAV-R (Recovery)

LCUs—Utility Landing Craft

LtGen—Lieutenant General

LVS—Logistics Vehicle System

M110A2 8" Self-Propelled Howitzers—The crew of five (commander, driver, and three gunners) can normally fire one round every two minutes; includes a 12.7mm M2 HB antiaircraft machine gun.

M109A3 155mm Towed Howitzers—The M126 155mm howitzer can fire one round per minute under normal conditions.

M60A1 Tank—Crew consists of a driver, commander, and gunner. Armaments include a 105mm M68 rifled tank gun firing eight rounds per minute, a M85 12.7mm machine gun, and a 7.62 mm M73 machine gun.

M60 Tank with M9 Bulldozer Blade—"Blade" Tank.

M88A1 Tank Retriever—Recovery vehicle for main battle tanks capable of completely lifting a 155mm M109A1 self-propelled howitzer.

MAG—Marine Aircraft Group

MAGTF—Marine Air Ground Task Force

MajGen—Major General

MarCent—Marine Corps Command Component of the U.S. Central Command

MARFORSWA—Marine Forces Southwest Asia

MCSSDs—Mobile Combat Service Support Detachment

MedLog—Medical Logistics

MAW—Marine Aircraft Wing

MEB—Marine Expeditionary Brigade

MEF—Marine Expeditionary Force

MEU—Marine Expeditionary Unit

MHE—Material-Handling Equipment

MLRS—Multiple Launch Rocket Systems

MOPP—Mission Oriented Protective Posture. Protective equipment for chemical attack consisting of a suit made of charcoal-activated cloth, overboots, gloves, and a gas mask with hood. There are four MOPP levels, depending upon the threat of a chemical attack, and each prescribes which items are to be worn. Level 1 consists of wearing the suit (trousers and jacket) and carrying the boots, gloves, and mask with hood. Level 2 adds the overboots to be worn, with the gloves and mask with hood still carried. At level 3 the mask with hood is worn. Level 4 requires the wearing of the entire outfit, including the gloves.

MP—Military Police

MPF—Maritime Prepositioning Forces

MPS—Maritime Prepositioning Ships. A Marine Corps concept under which ships have been preloaded with combat equipment and supplies and then forward deployed.

MPSRons—Maritime Prepositioning Ships Squadrons

MREs—Meals Ready to Eat

MSC—Military Sealift Command

MSSG—Marine Expeditionary Unit Service Support Group

MV—Motor Vessel

MWSG—Marine Wing Support Group

MWSS—Marine Wing Support Squadron

NAVCHAPGRU—Naval Cargo Handling and Port Operations Group

NBCB—Naval Base Construction Battalion

NCR—Naval Construction Regiment

NMCB—Naval Mobile Construction Battalion (Seabees)

NSE—Navy Support Element

ORF—Operational Readiness Float

OV-10 Broncos, Rockwell—Two-seat, multi-purpose, counterinsurgency and night surveillance aircraft with a maximum speed at sea level of 250 knots.

PLRS—Position Locating and Reporting Systems. This UHF radio network provides precise position locations of subordinate units. The system consists of a master unit with a visual display, and user units which can be manpacked or mounted in vehicles. The master unit continuously updates the location of each user.

POG—Port Operations Group

QEP—Quick Exchange Program

RCT—Regimental Combat Team

RTCH—Rough Terrain Container Hauler

ROWPUs—Reverse Osmosis Water Purification Units

SASSY—Marine Corps Automated Supply Support System

SBT—Support Breach Team

SOC—Special Operations Capable

TAVBs—Maintenance and Aviation/Support Ships.

TOWs—Tube-launched, optically tracked, wire-guided antitank missile systems. An antitank missile which can be used by infantrymen, or mounted on vehicles such as the LAV, the BFV, or the HMMWV.

UH-1N Huey, Bell Helicopter/Textron—Twin-turbine engine utility helicopter capable of carrying up to 14 passengers at maximum sea-level cruising speed of 100 knots.

USCentCom—U.S. Central Command

VMA—Marine Attack Squadron

VMAQ—Marine Electronic Warfare Squadron

VMFA—Marine Fighter Attack Squadron

VMGR—Marine Aerial Refueller Transport Squadron

VMO—Marine Observation Aircraft Squadron

## Appendix E

### Chronology of Significant Events

#### 2 August 1990 through 10 October 1991

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2 Aug—Iraq invades and occupies Kuwait. The United States Government orders two carrier battle groups to the Persian Gulf.

6 Aug—The United Nations authorizes economic sanctions against Iraq. MajGen John I. Hopkins, Commanding Officer of the 7th Marine Expeditionary Brigade (7th MEB), orders Brigade Service Support Group 7 (BSSG-7) to “stand-up” its wartime table of organization and to marry up with Maritime Prepositioning Ships Squadron 2 (MPSRon-2, Diego Garcia) at the Port of Al Jubayl, Saudi Arabia.

7 Aug—United States Central Command (CentCom) orders a brigade of the 82d Airborne Division, elements of the Air Force’s 1st Tactical Wing, and two squadrons of Maritime Prepositioning Ships to Saudi Arabia.

10 Aug—The Commander-in-Chief Atlantic Fleet (CincLantFlt) orders the 4th MEB from Camp Lejeune, North Carolina, to the Persian Gulf.

11 Aug—BSSG-7 arrives in Saudi Arabia to prepare the Port of Al Jubayl for unloading MPSRon-2.

14 Aug—The 7th MEB, from the Marine Corps Air-Ground Combat Center at Twentynine Palms, California, is the first Marine combat organization to arrive in the Persian Gulf.

15 Aug—Three ships of MPSRon-2 reach the port of Al Jubayl. The Marines of the rations section begin issuing MREs (meals ready to eat) to the 7th MEB.

16 Aug—Military Airlift Command (MAC) begins flying missions to Jubayl Naval Air Facility.

17-22 Aug—BSSG-4 departs with 1,464 Marines and sailors from Moorehead City, North Carolina.

21 Aug—BSSG-7 increases to 2,841 Marines and sailors in country.

22 Aug—All 21 officers and 426 enlisted Marines and sailors of Marine Wing Support Squadron 374 (MWSS-374) were in Saudi Arabia.

24 Aug—Twenty McDonald Douglas AV-8B Harrier jets of the Marine Attack

Squadron 311 (VMA-311) arrive at King Abdul Aziz Naval Air Station, approximately 50 kilometers southeast of Jubayl.

25 Aug—The 7th MEB announces its readiness to defend Jubayl, a week prior to expectations.

26 Aug—Combat Service Support Detachment 73 (CSSD-73) reaches a strength of 90 Marines and sailors. The unit is deployed to the junction of the coastal highway and the road leading to Manifah Bay, making them the closest to the Kuwait border.

26-30 Aug—Four ships from MPSRon-3 (Guam) arrive in Al Jubayl.

28-30 Aug—Members of the Commander Naval Construction Battalions Pacific Fleet (ComCBPac) command element reach Saudi Arabia.

3 Sept—BGen James A. Bradham assumes command of the 1st Force Service Support Group (1st FSSG).

8 Sept—MWSS-174 joins 1st Force Service Support Group (FSSG) and Regimental Combat Team 3 (RCT-3) at Ras Al Ghar Naval Base awaiting deployment to forward locations.

13 Sept—Marine air-ground task force (MAGTF), from Okinawa, docks at Jubayl.

29 Sept—Naval Mobile Construction Battalion 40 (NMCB-40), and GSG-1 (General Support Group 1) engineers begin construction of Forward Ammunition Storage Point 2 (FASP-2). Along with FASP-1, CSSD-111 and -141, FASP-2 gave the 1st Marine Division the wherewithal to engage Iraqi forces.

17 Oct—GSG-1's air-delivery platoon parachutes supplies to CSSD-141 for the first time.

30 Oct—The size of I Marine Expeditionary Force (MEF) increases to 31,391 Marines and sailors of whom 8,511 belonged to 1st FSSG, ComCBPac Foxtrot Delta, and the three MWSSs.

8 Nov—President Bush opts for an offensive capability, ordering an additional 150,000 troops to the Persian Gulf.

14 Nov—Secretary of Defense Richard Cheney grants the Marine Corps the authority to call up 15,000 Reservists.

19 Nov—NMCB-40 completes the 1st Marine Division mess hall at Abu Hadriyah, in time to host President Bush for Thanksgiving dinner.

29 Nov—U.N. Security Council Resolution 678 authorizes the use of “all necessary means” to remove Iraqi forces from Kuwait if these forces do not leave by 15 January 1991.

1 Dec—The 5th MEB commanded by BGen Peter J. Rowe departs southern California for Southwest Asia.

11 Dec—I MEF increases by 58 percent when air flow reinforcements start bringing an average of 945 Marines and sailors and 222 short tons of cargo every day for the remainder of the month.

22 Dec—BGen Charles C. Krulak, Commanding Officer of the 2d FSSG, activates the Direct Support Command (DSC), establishing a direct support pipeline to the ground combat element.

6-15 Jan—DSC’s engineers build a sprawling complex of more than 40 square kilometers at Kibrit, directly west of Al Mishab, as a defensive measure against Iraqi air and artillery attack.

12 Jan—Congress approves the President’s use of military force against Iraq.

15 Jan—The U.N. deadline for the Iraqi withdrawal from Kuwait passes.

17 Jan—Desert Shield ends, and Desert Storm begins when CentCom orders the air war to begin.

17-19 Jan—Iraqis respond to U.S. air bombardment by shooting FROG (free-rockets-over-the ground) missiles at Mishab.

23 Jan—The DSC sent CSSD-91 (prison camp) its first three occupants who were processed, held, and shipped south by the U.S. Army.

29 Jan—A brigade from the Iraqi 5th Mechanized Division captures the Saudi border town of Khafji, trapping two reconnaissance teams from the 1st Marine Division. BGen Krulak orders a 100 percent alert, focusing on the defense of Kibrit. The Marines of CSSD-91 blow up their weapons and fall back on Kibrit to avoid capture.

30 Jan—The 4th Marines, Task Force Grizzly, commanded by Col James A. Fulks, rushes to Qaraah with the mission of defending the border area from further Iraqi aggression.

31 Jan—Saudi and Qatari forces capture Khafji and rescue the 12 reconnaissance Marines from the 1st Marine Division.

2 Feb—U.S. Navy aircraft mistakenly bomb S Battery, 5th Battalion, 11th

Marines, 30 kilometers north of Qaraah, killing one Marine and wounding two others.

3-7 Feb—A Marine Explosive Ordnance Disposal (EOD) team clears Kafji where it destroys a total of 4,000 pieces of ordnance and removes 80 armored vehicles.

9-20 Feb—DSC moves from Kibrit to Khanjar, approximately 160km northwest of Kibrit, in massive supply buildup.

14 Feb—As of this date, the active-duty end-strength of the Marine Corps was 200,248, including Reservists on active-duty. It was the first time active-duty end-strength exceeded 200,000 since fiscal year 1971.

23 Feb—I MEF logistically ready to begin its advance on Iraqi positions in Kuwait.

24 Feb—I MEF began its assault at 0400, aimed directly at al-Mutl'a Pass, and the roads leading from Kuwait City. I MEF faced the stongest concentration of enemy defenses in theater, penetrating the first obstacle belt. Serial I's Marines from Mobile Combat Service Support Detachment 26 (MCSSD-26) exchanged fire with enemy, and captured the commanding general of the *14th Infantry Division (Commando)*.

25 Feb—I MEF advances against limited resistance during the ground offensive. Iraqis engage Task Force Papa Bear in a 10-minute battle around the regimental headquarters followed by a three-hour assault on the 1st Tank Battalion.

26 Feb—Task Force Ripper engages large numbers of dug-in Iraqi infantry and armor, receives artillery fire, and captures numerous Iraqis as it reached Kuwait International Airport. Company A, 7th Engineer Support Battalion, moves toward Kuwait International Airport, where the engineers came under Iraqi fire. Eight thousand Iraqi prisoners of war reach the compound at Kibrit.

27 Feb—The 1st Marine Division consolidates its area and clears the last pockets of resistance around Kuwait International Airport.

28 Feb—A cease-fire takes effect. I MEF had a strength of 92,900 at the end of Operation Desert Storm.

4 Mar—MCSSD-11's and Direct Support Group 1's (DSG-1) headquarters are moved from Kuwait International Airport to Manifah Bay, initiating the deactivation process.

8 Mar—Khanjar is completely emptied and moved to Mishab.



21 Apr—Marine Forces Southwest Asia (MARFORSWA) is established by the Commandant.

6 May—The 8th Marines and MCSSD-28 return to Saudi Arabia, and end the Marine Corps deployment to Kuwait.

10 Oct—BGen Gary E. Brown disestablishes MARFORSWA, and departs Saudi Arabia, ending the Marine Corps deployment to the Persian Gulf.

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*The device reproduced on the back cover is the oldest military insignia in continuous use in the United States. It first appeared, as shown here, on Marine Corps buttons adopted in 1804. With the stars changed to five points, the device has continued on Marine Corps buttons to the present day.*

